The University of Houston College of Pharmacy

DOCTOR OF PHARMACY
ADVANCED PHARMACY PRACTICE EXPERIENCE
MANUAL AND SYLLABI

A Guide for Students

Experiential Programs Office
College of Pharmacy
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Summer 2016 – Spring 2017
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Program Coordinator  
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Email: grcuriel@uh.edu
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Please refer to Blackboard for all evaluation forms.
PHAR 5690 INTERNAL MEDICINE

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The goal of Internal Medicine Advanced Pharmacy Practice Experience (APPE) rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and apply them in direct patient care activities in a hospital and health-system setting. This required rotation will integrate knowledge of therapeutics and pathophysiology and is designed to allow the student the opportunity to provide pharmaceutical care in the areas of adult internal medicine, anticoagulation, and pharmacokinetics. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to obtaining medication history, selecting drug therapy, patient monitoring, patient education, drug administration, and delivery of clinical pharmacy services to hospitalized patients.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of rotation, the student will be able to

1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system.
3. In collaboration with the health care team, provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process
4. Ensure continuity of care during patient transitions between care settings
5. Collaborate with other Interprofessional team members
6. Apply pharmacy practice management skills related to medication resources and informatics
7. Manages and prioritizes patient care activities and workload
8. Participate in medication event reporting
9. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
10. Display professional behavior, self-awareness, advocacy, and commitment to the profession

ASSESSMENTS

1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Journal Club Evaluation  
   a. Preceptor to evaluate and assign grade using school-approved Journal Club evaluation rubric  
   b. Student to upload completed evaluation form and handout via Learning Modules in Evalue by the last Thursday of rotation

5. Presentation  
   a. Preceptor to evaluate and assign grade using school-approved presentation evaluation rubric  
   b. Student to upload completed evaluation form and handout via Learning Modules in Evalue by the last Thursday of rotation

6. Written assignment  
   a. Preceptor to assign type of written assignment (drug information question, literature review, monograph, etc)  
   b. Preceptor to evaluate and grade written assignment  
   c. If drug information inquiry, preceptor to evaluate and grade using school-approved Drug Information Inquiry rubric  
   d. Student to upload completed evaluation form and handout via Learning Modules in Evalue by the last Thursday of rotation

7. Interventions (graded by APPE Director)  
   a. Submit 20 complete interventions via PxDx in Evalue by the last Thursday of rotation to earn full credit  
   b. Required interventions: 1 med reconciliation, 1 formulary mgmt., 1 medication history, 1 medication error, 2 patient counseling  
   c. APPE Director will review for completeness and quantity requirement and assign grade

8. Practice Experiential Director Grade

Other Required Documents:  
1. Hours logged properly (240 hours minimum)  
   a. Hours must be verified by preceptors  
2. Student of Site Evaluation  
3. Student of Preceptor Evaluation

Grading Procedures:  
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade at midpoint that does not count towards the final grade on a transcript. The grade received at midpoint evaluation will be utilized for student self-reflection and to set goals for the second remaining half of the rotation. Students will receive a final grade on the last day of the APPE that will be transferred to the student’s transcript. Grading occurs via an automatic calculation present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%  
A total of 500 APPE points may be achieved upon completion of PHAR 5690 Internal Medicine APPE. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:
In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation

*Practice Experiential Director Grade = Accountability and responsibility points

Grading Scale:
A letter grade is assigned based on the total points earned

<table>
<thead>
<tr>
<th>Letter</th>
<th>Total APPE rotation</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>450 - 500 points</td>
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<td>60 – 69% repeat APPE</td>
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<td>F</td>
<td>Less than 325 points</td>
<td>Below 65% - repeat APPE</td>
</tr>
</tbody>
</table>

To obtain a grade of C or better the student must:
  a. Follow honor code and guidelines of the Internship and Attendance Policies
  b. Earn a minimum of 70% on the Internal Medicine examination
  c. Complete all assignments
  d. Complete all required course evaluations (preceptor, site, and intern)
  e. Submit all required rotation paperwork by the appropriate deadlines

Additional Resources:  See Blackboard
PHAR 5690 Internal Medicine Exam Topics 2016-2017

An Internal Medicine exam will be administered at the end of each rotation during On Campus Day on ExamSoft. Please ensure your computer has the latest version of ExamSoft to prevent any issues on the day of the exam. Refer to On Campus Day schedule for exam time and room.

**Exam format:** multiple choice questions, short answer, essay, may or may not be case-based questions

**Topics:** The following topics may be on the exam. Please read any new guidelines pertaining to the disease states listed below:

- Interpretation of laboratory data – ex. CBC, comprehensive metabolic panel, cholesterol data, etc.
- Pharmacokinetics
- Delirium
- Anemia
- Respiratory tract infections – ex: pneumonia, urinary tract infections, catheter related infections, blood stream infections, opportunistic infections, fungal, skin & soft tissue, endocarditis, *Clostridium difficile*, osteomyelitis
- Hypertension, heart failure, ischemic heart disease, acute coronary syndromes, thromboembolic disorder, stroke, arrhythmias, hyperlipidemia
- Asthma, COPD
- Renal failure (acute/chronic), hemodialysis and effects on medications, acid base disorders, fluid and electrolyte balance
- Diabetes Type 1 and Type 2, DKA, hyperglycemia
- GI Bleeding, peptic ulcer disease, pancreatitis, Liver disease
- Seizures
- Depression
- Sickle cell crisis, opiate therapy

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PHAR 5692 ADVANCED HOSPITAL PHARMACY

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The goal of Advanced Hospital Pharmacy Advanced Pharmacy Practice Experience (APPE) required rotation is to provide a pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and apply them in direct patient care activities in a hospital and health-system setting. Students will develop and explore their roles in the various pharmaceutical operational initiatives that support the clinical services designed to care for the patient. The student will learn the functions of various personnel (i.e. hospital pharmacy technicians and pharmacists) which may include experiencing the roles of pharmacists in central distribution, decentralized clinical services, transitions of care activities, investigational drug services, pharmacy administration, and others. Additionally, the student will learn and work with different technologies in pharmacy practice, such as order verification, automated dispensing cabinets, high density storage devices, barcode medication identification technology, and the electronic healthcare record. Students will gain experience in the preparation of parenteral medications (as allowed per site policy), drug distribution, practice management-related activities as well as decision-making and drug information activities. Through this hands-on experiential rotation, an individual will progress from the student pharmacist level to being accountable for pharmacist-delivered, patient-centered care. Finally, in working with many different levels of personnel throughout the rotation, students will practice establishing and maintaining professional relationships, effective communication, and networking. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to identifying of therapeutic needs of the patient, reviewing medication profiles, counseling patients, monitoring drug efficacy and toxicity, and working with the interprofessional team to provide drug information and drug therapy recommendations.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of rotation, the student will be able to

1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Collaborate with interprofessional team members to optimize patient health and medication outcomes
3. Manage and prioritize patient care activities and workload
4. Prepare, dispense, and manage medications to support safe and effective drug therapy for patients
5. Participate in medication event reporting
6. Apply pharmacy practice management skills related to human resources, medication resources, informatics, pharmacy workload and financial performance
7. Apply knowledge in health-system pharmacy operations
8. Participate in the accreditation and regulatory processes associated with health-system pharmacy
9. Participate in the medication management system to improve medication safety
10. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
11. Display professional behavior, self-awareness, advocacy, and commitment to the profession
12. Display professional behavior, self-awareness, advocacy, and commitment to the profession

ASSESSMENTS
1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor final evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-evaluation (Start, mid, end of rotation)
4. Presentation
   a. Preceptor to grade using school-approved presentation evaluation rubric
   b. Student to upload completed evaluation form and handout (if using) via Learning Modules in Evalue by the last Thursday of rotation
5. Sterile Product / Aseptic Technique Skills Checkoff
   a. Student to upload completed evaluation form via Learning Modules in Evalue by the last Thursday of rotation
6. Advanced Hospital Pharmacy rotation examination
7. Interventions (graded by APPE Director)
   a. Submit 20 complete interventions via PxDx in Evalue by the last Thursday of rotation to earn full credit – submit 1 medication error
   b. APPE Director will review for completeness and quantity requirement and assign grade
8. Practice Experiential Director Grade
9. Written Assignment (graded by Practice Experiential Director Grade) – refer to Blackboard for more information, please upload on Evalue MyFolio – Life Long Learning the Monday prior to Oncampus Day for APPE 1-6; APPE 7 – March 27, 2017.

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Required readings/references
c. Sigler’s Injectable Drugs Study Cards. 6th edition.
   d. Other assigned readings in Advanced Hospital Pharmacy folder on Blackboard

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade at midpoint that does not count towards the final grade on a transcript. The grade received at midpoint evaluation will be utilized for student self-reflection and to set goals for the second remaining half of the rotation. Students will receive a final grade on the last day of the APPE that will be transferred to the student’s transcript. Grading occurs via an automatic calculation present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%
A total of 500 APPE points may be achieved upon completion of PHAR 5692 Advanced Hospital Pharmacy APPE. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:

| Final evaluation from preceptor | 300 points |
| Assignments (from preceptor)   | 100 points |
| Rotation examination            | 50 points  |
| Practice Experiential Director Grade* | 50 points |
| **Total**                      | **500 points** |

In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation

*Practice Experiential Director Grade = Accountability and responsibility points

Grading Scale:
A letter grade is assigned based on the total points earned

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<tr>
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<tr>
<td>F</td>
<td>Less than 325 points</td>
<td>Below 65% - repeat APPE</td>
</tr>
</tbody>
</table>

To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Earn a minimum of 70% on the Advanced Hospital Pharmacy examination
3. Complete all assignments
4. Complete all required course evaluations (preceptor, site, and intern)
5. Submit all required rotation paperwork by the appropriate deadlines

Suggested Resources
1. www.ashp.org
2. The Joint Commission https://www.jointcommission.org/
General areas:
(Topics may be adjusted based on preceptor’s discretion and/or patient population at rotation site)

Diseases/Therapeutics
Antibiotic stewardship
Beers criteria of medications considered inappropriate for older adults
Drug-drug, drug-food, & drug-lab interactions
Evaluating medication regimens
IV to PO conversions
Medication reconciliation & discharge counseling
Pharmacokinetic and pharmacodynamic alterations in special populations, including in older adults

Scope of clinical services
Surgical prophylaxis
Automation technology/robotics
Crash carts
Drug destruction
Drug recalls
Drug shortages and backorders
Drug use evaluations
In-service education
Interrelationships between departments
Look-alike/sound-alike drug names
Medication bar code administration systems
Med pass
Newsletter
Patient safety
Patients at high risk for ADRs
Personnel management
Pharmacy technicians
Polypharmacy
Prevention of med errors
Pharmacy & Therapeutics Committee
Quality indicators/measures

Regulatory/Legislative
Board of Pharmacy inspection
Centers for Medicare and Medicaid Services (CMS)
Texas State Board of Pharmacy laws and regulations governing hospital pharmacy practice
National Patient Safety Goals of The Joint Commission
U. S. Pharmacopeia (USP 797/US 800) Council
The Joint Commission standards governing hospital pharmacy practice
PHAR 5642 EMERGENCY MEDICINE

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The goal of Emergency Medicine Advanced Pharmacy Practice Experience (APPE) rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and apply them in direct patient care activities in the Emergency Department. The student will become familiar with the role of the pharmacist in the Emergency Department, key skills utilized as a clinical pharmacist in the Emergency Department (ED), obtain experience in working with an interdisciplinary team and to work to optimize pharmacotherapeutic management and improve patient care and safety. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to optimization of medication use through interaction with the Emergency Medicine team; order review; drug therapy monitoring; participation in high-risk procedures including resuscitation and other time dependent emergencies; monitoring use of high-risk medications; medication procurement and preparation; and provision of drug information. The student will participate in several activities to improve the student’s working knowledge and experience with ED patients – which include a wide scope of severity from ambulatory to the critically ill.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:
Upon completion of rotation, the student will be able to

1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
5. Collaborate with other interprofessional team members
6. Apply pharmacy practice management skills related to medication resources and informatics
7. Manage and prioritize patient care activities and workload
8. Communicate with a diverse patient population, caregiver, and health care professionals in face to face, written or electronic media to reach optimal outcomes
9. Display professional behavior, self-awareness, advocacy, and commitment to the profession
ASSESSMENTS:
1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Journal Club Evaluation
   a. Preceptor to evaluate and assign grade using school-approved Journal Club
evaluation rubric
   b. Student to upload completed evaluation form and handout via Learning Modules
      in Evalue by the last Thursday of rotation
5. Interventions (graded by APPE Director)
   a. Submit 20 complete interventions via PxDx in Evalue by the last Thursday of
      rotation
   b. APPE Director will review for completeness and quantity requirement and assign
      grade
6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Suggested reading:
Thomas MC, Acquisto NM, et al. A national survey of emergency pharmacy practice in the
United States. American Journal of Health-System Pharmacy 2016;73 (6): 386-394; http://www.ajhp.org/content/73/6/386

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade
at midpoint that does not count towards the final grade on a transcript. The grade received at
midpoint evaluation will be utilized for student self-reflection and to set goals for the second
remaining half of the rotation. Students will receive a final grade on the last day of the APPE
that will be transferred to the student’s transcript. Grading occurs via an automatic calculation
present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%
A total of 500 APPE points may be achieved upon completion of PHAR 5642 Emergency
Medicine APPE. These points are composed of scores as delineated below. The following
maximum point values may be achieved in each of the areas:

<table>
<thead>
<tr>
<th></th>
<th>Points</th>
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<tbody>
<tr>
<td>Final evaluation</td>
<td>300</td>
</tr>
<tr>
<td>from preceptor</td>
<td></td>
</tr>
<tr>
<td>Assignments (from</td>
<td>100</td>
</tr>
<tr>
<td>preceptor)</td>
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In order to receive a passing grade for the rotation the student
3. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
4. Must NOT receive a “1” rating on the end of rotation evaluation

*Practice Experiential Director Grade = Accountability and responsibility points

Grading Scale:
A letter grade is assigned based on the total points earned

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To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines

General Areas: (Topics may be adjusted based on preceptor’s discretion and/or patient population at rotation site)
1. Acute coronary syndrome
2. Acute appendicitis
3. Acute chronic obstructive pulmonary disorder exacerbation
4. Altered mental status
5. Anaphylaxis/acute allergic reactions/angioedema
6. Anemia
7. Asthma exacerbation
8. Diabetic ketoacidosis/hyperosmolar hyperglycemic state
9. Blood loss and replacements
10. Coagulopathies
11. Clotting disorders
12. CNS infections
13. Febrile seizures
14. Infections in the immunocompromised host
15. Ischemic stroke
16. Pain – acute, acute exacerbation of chronic pain
17. Resuscitation and life support
18. Renal failure – acute
19. Rhabdomyolysis
20. Seizures
21. Skin and soft tissue infections
22. Substance abuse/withdrawal
23. Wound infections
PHAR 5643 NEUROLOGY

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The goal of Neurology Advanced Pharmacy Practice Experience (APPE) rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) and apply them in direct patient care activities in a hospital and health-system setting. This elective rotation allows the student gains competency in medical management of patients with neurological disorders. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to interviewing patients and/or caregiver(s), order review; drug therapy monitoring; evaluating literature, interpreting data, assessing drug therapy, making recommendations for and monitoring drug therapy, and understanding and utilizing the evidence-based principles of medicine needed to develop an optimal therapeutic plan for neurology patients.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of rotation, the student will be able to

1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
5. Collaborate with other interprofessional team members
6. Apply pharmacy practice management skills related to medication resources and informatics
7. Manage and prioritize patient care activities and workload
8. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
9. Display professional behavior, self-awareness, advocacy, and commitment to the profession
ASSESSMENTS:
1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor final evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-evaluation (Start, mid, end of rotation evaluation)
4. Journal Club Evaluation
   a. Preceptor to evaluate and assign grade using school-approved Journal Club
      evaluation rubric
   b. Student to upload completed evaluation form and handout via Learning Modules
      in Evalue by the last Thursday of rotation
5. Interventions (graded by APPE Director)
   a. Submit 20 complete interventions via PxDx in Evalue by the last Thursday of
      rotation
   b. APPE Director will review for completeness and quantity requirement and assign
      grade
6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade
at midpoint that does not count towards the final grade on a transcript. The grade received at
midpoint evaluation will be utilized for student self-reflection and to set goals for the second
remaining half of the rotation. Students will receive a final grade on the last day of the APPE
that will be transferred to the student’s transcript. Grading occurs via an automatic calculation
present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%
A total of 500 APPE points may be achieved upon completion of PHAR 5643 Neurology. These
points are composed of scores as delineated below. The following maximum point values may
be achieved in each of the areas:

<table>
<thead>
<tr>
<th>Evaluation Category</th>
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<td>Assignments (from preceptor)</td>
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<td>Practice Experiential Director Grade*</td>
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</tr>
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<td><strong>Total</strong></td>
<td><strong>500</strong></td>
</tr>
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</table>

In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation
   evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation

*Practice Experiential Director Grade = Accountability and responsibility points

**Grading Scale:**

A letter grade is assigned based on the total points earned

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To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines

**General Areas** (Topics may be adjusted based on preceptor’s discretion and/or patient population at rotation site)
1. Mood disorders (major depressive disorder, bipolar disorders)
2. Anxiety disorders (agoraphobia, generalized anxiety disorder, obsessive-compulsive disorder, panic disorder, posttraumatic stress disorder, social phobia, specific phobia)
3. Altered mental status
4. Ataxia and gait disturbances
5. Headaches
6. Sleep disorders
7. Psychotic disorders
8. Parkinsonism
9. Seizure disorders
10. Vertigo
PHAR 5674 NUTRITIONAL SUPPORT

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The goal of Nutritional Support Advanced Pharmacy Practice Experience (APPE) rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) and apply them in direct patient care activities in a hospital and health-system setting. This rotation is designed to give the student a basic understanding of the goals of nutrition support with an emphasis on parenteral nutrition. This experiential rotation will focus on disease based nutritional assessment with emphasis on evaluating individual patient macro and micro nutrient requirements, and fluid & electrolyte management. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to daily data collection of information on nutrition support patients, evaluating the nutrition support therapy, and then formulate parenteral nutrition orders with recommendations. The student will evaluate each order for potential critical stability issues (e.g. 3:1 & Ca/Phosphate solubility) prior to presenting the order for pharmacist review. The student will perform daily documentation of nutrition therapy interventions.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, clinical dietitians and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of rotation, the student will be able to

1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
5. Collaborate with other interprofessional team members
6. Apply pharmacy practice management skills related to medication resources and informatics
7. Manage and prioritize patient care activities and workload
8. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
9. Display professional behavior, self-awareness, advocacy, and commitment to the profession
ASSESSMENTS:
1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Journal Club Evaluation
   a. Preceptor to evaluate and assign grade using school-approved Journal Club evaluation rubric
   b. Student to upload completed evaluation form and handout via Learning Modules in Evalue by the last Thursday of rotation
5. Interventions (graded by APPE Director)
   a. Submit 20 complete interventions via PxDx in Evalue by the last Thursday of rotation
   a. APPE Director will review for completeness and quantity requirement and assign grade
6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade at midpoint that does not count towards the final grade on a transcript. The grade received at midpoint evaluation will be utilized for student self-reflection and to set goals for the second remaining half of the rotation. Students will receive a final grade on the last day of the APPE that will be transferred to the student’s transcript. Grading occurs via an automatic calculation present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%.
A total of 500 APPE points may be achieved upon completion of PHAR 5674 Nutritional Support APPE. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:

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In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation

*Practice Experiential Director Grade = Accountability and responsibility points

Grading Scale:
A letter grade is assigned based on the total points earned**

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**To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines

Suggested resource:
1. American Society for Parenteral and Enteral Nutrition - [www.nutritioncare.org](http://www.nutritioncare.org)
PHAR 5678 TRANSPLANT THERAPEUTICS

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The goal of Transplant Therapeutics Advanced Pharmacy Practice Experience (APPE) rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) and apply them in direct patient care activities in a hospital and health-system setting. This rotation is designed to give the student an understanding of the care of transplant surgery patients. The student will gain experience in a clinical practice setting with an emphasis on the application of pharmacotherapeutic principles to the management of transplant patients. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to obtaining and assessing clinical information, thoroughly evaluating literature, developing pharmaceutical care plans, and participating in case discussions. The patient population includes candidates for transplant as well as patients who have undergone kidney, pancreas, liver, lung, and/or heart transplantation. The specific transplant patient population will be dependent on the site and preceptor.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, clinical dietitians and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:
Upon completion of rotation, the student will be able to
1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
5. Collaborate with other interprofessional team members
6. Apply pharmacy practice management skills related to medication resources and informatics
7. Manage and prioritize patient care activities and workload
8. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
9. Display professional behavior, self-awareness, advocacy, and commitment to the profession
ASSESSMENTS:
1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Journal Club Evaluation
   a. Preceptor to evaluate and assign grade using school-approved Journal Club evaluation rubric
   b. Student to upload completed evaluation form and handout via Learning Modules in Evalue by the last Thursday of rotation
5. Interventions (graded by APPE Director)
   a. Submit 20 complete interventions via PxDx in Evalue by the last Thursday of rotation
   b. APPE Director will review for completeness and quantity requirement and assign grade
6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade at midpoint that does not count towards the final grade on a transcript. The grade received at midpoint evaluation will be utilized for student self-reflection and to set goals for the second remaining half of the rotation. Students will receive a final grade on the last day of the APPE that will be transferred to the student’s transcript. Grading occurs via an automatic calculation present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%
A total of 500 APPE points may be achieved upon completion of PHAR 5678 Transplant Therapeutics APPE. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:

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In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation

*Practice Experiential Director Grade = Accountability and responsibility points

**Grading Scale:**

A letter grade is assigned based on the total points earned**

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**To obtain a grade of C or better the student must:

1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines
PHAR 5679 WOMEN’S HEALTH THERAPEUTICS

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The goal of Women’s Health Therapeutics Advanced Pharmacy Practice Experience (APPE) rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) and apply them in direct patient care activities in a hospital and health-system setting. This elective rotation allows the student to assess not only the pharmacotherapy and appropriateness of drugs, but also to practice in a variety of women health issues including but not limited to preconception care, contraception, drugs in pregnancy and lactation, menopause pharmacotherapy, osteoporosis, and labor and delivery.

Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to interviewing patients and/or caregiver(s), order review; drug therapy monitoring; evaluating literature, interpreting data, assessing drug therapy, making recommendations for and monitoring drug therapy, and understanding and utilizing the evidence-based principles of medicine needed to develop an optimal therapeutic plan.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of rotation, the student will be able to

1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
5. Collaborate with other interprofessional team members
6. Apply pharmacy practice management skills related to medication resources and informatics
7. Manage and prioritize patient care activities and workload
8. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
9. Display professional behavior, self-awareness, advocacy, and commitment to the profession
ASSESSMENTS:
1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
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3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Journal Club Evaluation
   a. Preceptor to evaluate and assign grade using school-approved Journal Club evaluation rubric
   b. Student to upload completed evaluation form and handout via Learning Modules in Evalue by the last Thursday of rotation
5. Interventions (graded by APPE Director)
   a. Submit 20 complete interventions via PxDx in Evalue by the last Thursday of rotation
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6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade at midpoint that does not count towards the final grade on a transcript. The grade received at midpoint evaluation will be utilized for student self-reflection and to set goals for the second remaining half of the rotation. Students will receive a final grade on the last day of the APPE that will be transferred to the student’s transcript. Grading occurs via an automatic calculation present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70% A total of 500 APPE points may be achieved upon completion of PHAR 5679 Women’s Health Therapeutics APPE. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:

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In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation

*Practice Experiential Director Grade = Accountability and responsibility points

Grading Scale:
A letter grade is assigned based on the total points earned

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To obtain a grade of C or better the student must:
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2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines
PHAR 5680 ONCOLOGY

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The goal of Oncology Advanced Pharmacy Practice Experience (APPE) elective rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) and apply them in direct patient care activities in a hospital and health-system setting. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to identifying of therapeutic needs of the patient, reviewing medication profiles, counseling patients, monitoring drug efficacy and toxicity, and working with the interprofessional team to provide drug information and drug therapy recommendations.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, clinical dietitians and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of rotation, the student will be able to

1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
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8. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
9. Display professional behavior, self-awareness, advocacy, and commitment to the profession

ASSESSMENTS:

1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
a. Preceptor rotation evaluation score  
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Other Required Documents:  
1. Hours logged properly (240 hours minimum)  
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2. Student of Site Evaluation  
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Grading Procedures:  
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Grading criteria is competency based. Minimal passing performance is 70%  
A total of 500 APPE points may be achieved upon completion of PHAR 5680 Oncology APPE. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:  

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In order to receive a passing grade for the rotation the student  
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation  
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*Practice Experiential Director Grade = Accountability and responsibility points
Grading Scale:
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To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines

General Areas

a. Antineoplastic agents and their use
   a. Mechanism of Action
   b. Toxicity
   c. Dosing
   d. Pharmacokinetics
b. Understanding endpoints of therapy
   a. induction, consolidation, maintenance, adjuvant, neoadjuvant

   c. Neoplastic disorders
   d. Specific tumors that students will likely see on rotation (site dependent)
      a. Lymphoma
      b. Multiple myeloma
      c. Skin Cancer
      d. Breast Cancer
      e. Lung Cancer
      f. Colon Cancer
      g. G.U. Cancer (prostate, bladder, ovarian)
      h. Head and Neck
      i. CNS tumors

e. Supportive Care
   a. Chemotherapy induced nausea and vomiting
   b. Nutritional support in cancer patients

f. Neutropenic fever and infectious disease

   g. Cancer pain management
h. Chemotherapy extravasation

   i. Oncologic problems
      a. Tumor lysis syndrome
      b. Hypercalcemia
      c. Cord compression
      d. Superior vena cava syndrome

30
PHAR 5680 ONCOLOGY – PAIN AND PALLIATIVE

HOURS CREDIT:  6 hours

COURSE PURPOSE:

The goal of Oncology – Pain and Palliative Advanced Pharmacy Practice Experience (APPE) elective rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) and apply them in direct patient care activities in a hospital and health-system setting. Students on this elective rotation will have exposure to pain management, oncology supportive care issues, and end of life care. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to identifying of therapeutic needs of the patient, reviewing medication profiles, counseling patients and/or caregiver(s), monitoring drug efficacy and toxicity, and working with the interprofessional team to provide drug information and drug therapy recommendations.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, clinical dietitians and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of rotation, the student will be able to

1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
5. Collaborate with other interprofessional team members
6. Apply pharmacy practice management skills related to medication resources and informatics
7. Manage and prioritize patient care activities and workload
8. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
9. Display professional behavior, self-awareness, advocacy, and commitment to the profession

ASSESSMENTS:

1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Journal Club Evaluation
   a. Preceptor to evaluate and assign grade using school-approved Journal Club
      evaluation rubric
   b. Student to upload completed evaluation form and handout via Learning Modules
      in Evalue by the last Thursday of rotation
5. Interventions (graded by APPE Director)
   a. Submit 20 complete interventions via Px Dx in Evalue by the last Thursday of
      rotation
   b. APPE Director will review for completeness and quantity requirement and assign
      grade
6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade
at midpoint that does not count towards the final grade on a transcript. The grade received at
midpoint evaluation will be utilized for student self-reflection and to set goals for the second
remaining half of the rotation. Students will receive a final grade on the last day of the APPE
that will be transferred to the student’s transcript. Grading occurs via an automatic calculation
present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%
A total of 500 APPE points may be achieved upon completion of PHAR 5680 Oncology – Pain
and Palliative APPE. These points are composed of scores as delineated below. The following
maximum point values may be achieved in each of the areas:

<table>
<thead>
<tr>
<th>Evaluation Category</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final evaluation from preceptor</td>
<td>300</td>
</tr>
<tr>
<td>Assignments (from preceptor)</td>
<td>100</td>
</tr>
<tr>
<td>Practice Experiential Director Grade*</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>500</strong></td>
</tr>
</tbody>
</table>

In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation
*Practice Experiential Director Grade = Accountability and responsibility points

**Grading Scale:**
A letter grade is assigned based on the total points earned

<table>
<thead>
<tr>
<th>Letter Grade</th>
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</tr>
<tr>
<td>D</td>
<td>325 – 349</td>
<td>60 – 69% repeat APPE</td>
</tr>
<tr>
<td>F</td>
<td>Less than 325</td>
<td>Below 65% - repeat APPE</td>
</tr>
</tbody>
</table>

To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines

**General Areas (site and preceptor dependent)**
- j. End of life care
- k. Symptom management
- l. Cancer pain management
- m. Hospital and Palliative Care
- n. Delirium
- o. Constipation
- p. Chronic nausea/vomiting
- q. Opioid induced neurotoxicity
- r. Subcutaneous delivery of medications in palliative care
- s. Hypercalcemia of malignancy
- t. Malignant bowel obstruction
- u. Neuropathic pain
- v. Management of chronic diseases at the end of life

**Suggested Reading/Resources:**
1. NCCN guidelines on Cancer Pain and Palliative Care (available at [www.nccn.org](http://www.nccn.org))
3. Demystifying Opioid Conversion Calculations by Mary Lynn McPherson
PHAR 5685 INFECTIOUS DISEASES

HOURS CREDIT: 6 hours

COURSE PURPOSE:
The goal of Infectious Diseases Advanced Pharmacy Practice Experience (APPE) rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) and apply them in direct patient care activities in a hospital and health-system setting. This elective rotation is designed to allow the student to improve the use of antimicrobial drugs, understanding the pharmacokinetics and pharmacodynamics of antimicrobial use, understanding the cost of specific antimicrobial regimens, how the outcomes for patients with infectious disease can be studied and monitored and how a formulary for antimicrobial agents could be constructed and monitored. Students should also understand the limitations and use of in-vitro antimicrobial susceptibility testing. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to evaluating all aspects of the antimicrobial agents ordered and understand why specific antimicrobial agents are chosen, monitor for and report any adverse drug reactions, discuss the spectrum of specific antimicrobial agents, understand dose limiting toxicities, chosen length of therapy and providing medication recommendations and interventions in collaboration with the medical team.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, clinical dietitians and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:
Upon completion of rotation, the student will be able to
1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
5. Collaborate with other interprofessional team members
6. Apply pharmacy practice management skills related to medication resources and informatics
7. Manage and prioritize patient care activities and workload
8. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
9. Display professional behavior, self-awareness, advocacy, and commitment to the profession
ASSESSMENTS:
1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Journal Club Evaluation
   a. Preceptor to evaluate and assign grade using school-approved Journal Club evaluation rubric
   b. Student to upload completed evaluation form and handout via Learning Modules in Evalue by the last Thursday of rotation
5. Interventions (graded by APPE Director)
   a. Submit 20 complete interventions via PxDx in Evalue by the last Thursday of rotation
   b. APPE Director will review for completeness and quantity requirement and assign grade
6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade at midpoint that does not count towards the final grade on a transcript. The grade received at midpoint evaluation will be utilized for student self-reflection and to set goals for the second remaining half of the rotation. Students will receive a final grade on the last day of the APPE that will be transferred to the student’s transcript. Grading occurs via an automatic calculation present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%
A total of 500 APPE points may be achieved upon completion of PHAR 5681 Infectious Diseases APPE. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:

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In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation

*Practice Experiential Director Grade = Accountability and responsibility points

**Grading Scale:**
A letter grade is assigned based on the total points earned

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To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines

**General Areas** (Topics may be adjusted based on preceptor’s discretion and/or patient population at rotation site)

b. Skin and soft tissue infections Cellulitis, dog and cat bite, closed fist, and necrotizing soft-tissue infections
c. Diabetic foot infections, osteomyelitis, septic joint and orthopedic device infection
d. Intra-abdominal infections including primary, secondary and tertiary peritonitis
e. Clostridium difficile diarrhea
f. Bacteremia
g. Candidiasis
h. Hepatitis
i. Urinary-tract infections
j. Central nervous system infection including bacterial meningitis and herpes encephalitis
k. Febrile neutropenic patient
l. New fever in intensive care
m. Endocarditis
n. Drug fever
o. Pharmacokinetics – aminoglycosides, vancomycin
p. Laboratory data and interpretation
q. Pharmacotherapeutics of the various classes of antimicrobial agents
r. Empiric versus definitive therapy
s. Therapy of established infection
w. Therapy of infections in the immunocompromised host
x. Use of prophylactic antimicrobial agents
y. Development of resistance to antimicrobial agents
z. Common outpatient infections including otitis media, sinusitis, pharyngitis, bronchitis
PHAR 5683 CARDIOLOGY

HOURS CREDIT: 6 hours

COURSE PURPOSE:
The goal of Cardiology Advanced Pharmacy Practice Experience (APPE) rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) and apply them in direct patient care activities in a hospital and health-system setting. This rotation is designed to give the student an understanding of the management of hypertension, heart failure, cardiac arrhythmias, acute myocardial infarctions and interventional cardiac care as well as to learn skills in the provision of pharmacotherapy services to hospitalized patients. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to obtaining and assessing clinical information, thoroughly evaluating literature, developing pharmaceutical care plans, and participating in case discussions.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, clinical dietitians and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:
Upon completion of rotation, the student will be able to
1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
5. Collaborate with other interprofessional team members
6. Apply pharmacy practice management skills related to medication resources and informatics
7. Manage and prioritize patient care activities and workload
8. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
9. Display professional behavior, self-awareness, advocacy, and commitment to the profession

ASSESSMENTS:
1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
a. Preceptor rotation evaluation score  
b. Assignment score (provided by preceptor)  
   i. Numerical average of all assignments assigned by preceptor  
3. Intern Self-Evaluation (Start, mid, end of rotation)  
4. Journal Club Evaluation  
   a. Preceptor to evaluate and assign grade using school-approved Journal Club  
      evaluation rubric  
   b. Student to upload completed evaluation form and handout via Learning Modules  
      in Evalue by the last Thursday of rotation  
5. Interventions (graded by APPE Director)  
   a. Submit 20 complete interventions via PxDx in Evalue by the last Thursday of  
      rotation  
   b. APPE Director will review for completeness and quantity requirement and assign  
      grade  
6. Practice Experiential Director Grade  

Other Required Documents:  
1. Hours logged properly (240 hours minimum)  
   a. Hours must be verified by preceptors  
2. Student of Site Evaluation  
3. Student of Preceptor Evaluation  

Grading Procedures:  
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade  
at midpoint that does not count towards the final grade on a transcript. The grade received at  
midpoint evaluation will be utilized for student self-reflection and to set goals for the second  
remaining half of the rotation. Students will receive a final grade on the last day of the APPE  
that will be transferred to the student’s transcript. Grading occurs via an automatic calculation  
present in electronic evaluations in E-Value.  

Grading criteria is competency based. Minimal passing performance is 70%  
A total of 500 APPE points may be achieved upon completion of PHAR 5683 Cardiology APPE.  
These points are composed of scores as delineated below. The following maximum point values  
may be achieved in each of the areas:  

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</table>

In order to receive a passing grade for the rotation the student  
1. Must NOT receive four (4) or more “2” ratings on the end of rotation  
   evaluation  
2. Must NOT receive a “1” rating on the end of rotation evaluation  

*Practice Experiential Director Grade = Accountability and responsibility points
Grading Scale:
A letter grade is assigned based on the total points earned

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To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines

Areas of Emphasis (Topics may be adjusted based on preceptor’s discretion and/or patient population at rotation site)

Cardiology
a. Dyslipidemia
b. Atherosclerosis
c. Chronic Stable / Unstable Angina
d. Acute Coronary Syndrome / MI
e. Metabolic Syndrome
f. Heart Failure
g. Anticoagulation
h. Hypertension
i. Dysrhythmias
j. Stroke
k. Implantable Cardiac Defibrillator (ICD)

Cardiothoracic/Vascular
l. Basic cardiac and thoracic anatomy
m. Post-op Afib
n. Post-op bleeding / Hemostatic agents
o. Hemodynamic and physiologic monitoring
p. Valve replacement and repair procedures
q. Coronary Artery Bypass Grafting
r. Acute Decompensated Heart Failure
s. Ventricular Assist Devices / Balloon – Pump
t. Extracorporeal Membrane Oxygenation
PHAR 5685 CRITICAL CARE

HOURS CREDIT: 6 hours

COURSE PURPOSE:
The goal of Critical Care Advanced Pharmacy Practice Experience (APPE) rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) and apply them in direct patient care activities in a hospital and health-system setting. This elective rotation is designed to allow the student to improve skills in the provision of clinical pharmacotherapy services in critically ill patients. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to identifying of therapeutic needs of the patient, reviewing medication profiles, monitoring for efficacy and toxicity, and providing medication recommendations and interventions in collaboration with the medical team.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, clinical dietitians and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:
Upon completion of rotation, the student will be able to
1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
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6. Apply pharmacy practice management skills related to medication resources and informatics
7. Manage and prioritize patient care activities and workload
8. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
9. Display professional behavior, self-awareness, advocacy, and commitment to the profession

ASSESSMENTS:
1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Journal Club Evaluation
   a. Preceptor to evaluate and assign grade using school-approved Journal Club
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   b. Student to upload completed evaluation form and handout via Learning Modules
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5. Interventions (graded by APPE Director)
   i. Submit 20 complete interventions via PxDx in Evalue by the last Thursday
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   b. APPE Director will review for completeness and quantity requirement and assign
      grade
6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade
at midpoint that does not count towards the final grade on a transcript. The grade received at
midpoint evaluation will be utilized for student self-reflection and to set goals for the second
remaining half of the rotation. Students will receive a final grade on the last day of the APPE
that will be transferred to the student’s transcript. Grading occurs via an automatic calculation
present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%
A total of 500 APPE points may be achieved upon completion of PHAR 5685 Critical Care
APPE. These points are composed of scores as delineated below. The following maximum
point values may be achieved in each of the areas:

<table>
<thead>
<tr>
<th>Evaluation Type</th>
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</table>

In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation
*Practice Experiential Director Grade = Accountability and responsibility points

**Grading Scale:**
A letter grade is assigned based on the total points earned

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To obtain a grade of C or better the student must:

a. Follow honor code and guidelines of the Internship and Attendance Policies
b. Complete all assignments
c. Complete all required course evaluations (preceptor, site, and intern)
d. Submit all required rotation paperwork by the appropriate deadlines

**General Areas** (Topics may be adjusted based on preceptor’s discretion and/or patient population at rotation site)

1. General issues in ICU management and prophylaxis:
   a. Deep Vein Thrombosis/Pulmonary Embolism
   b. Gastrointestinal
2. Sedation, Analgesia, and Neuromuscular Blockade
3. Infectious Diseases
   a. Pneumonia - Ventilator Associated/Nosocomial/Aspiration
   b. Intraabdominal Infections
   c. Endocarditis
   d. Meningitis
   e. Catheter Related Infections
   f. Urinary Tract Infections
4. Sepsis Management
5. Vasoactive/Inotropic Therapy
6. Fluid/Electrolyte Management
7. Therapeutic Anticoagulation Management
8. Anemia in Critically Ill Patients
9. Basic Principles of Enteral/Parenteral Nutrition
10. Acid/Base Abnormalities
11. Pharmacokinetic dosing/monitoring
12. Pharmacotherapy in Renal/Hepatic Insufficiency/Failure
13. Blood Glucose Management in Critically Ill patients
14. ACLS
PHAR 5686 PSYCHIATRY (INPATIENT)

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The goal of Psychiatry (Inpatient) Advanced Pharmacy Practice Experience (APPE) rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and apply them in direct patient care activities in a hospital and health-system setting. The student will become familiar with the role of the Psychiatric pharmacist, optimize use of medications to treat psychiatries and neuropsychiatric disorders, and obtain experience in working with an interdisciplinary team. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to optimization of medication use through interaction with other members of the healthcare team, order review; drug therapy monitoring, monitoring use of high-risk medications, medication procurement and preparation and provision of drug information.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of rotation, the student will be able to

1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
5. Collaborate with other interprofessional team members
6. Apply pharmacy practice management skills related to medication resources and informatics
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9. Display professional behavior, self-awareness, advocacy, and commitment to the profession

ASSESSMENTS:

1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
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   b. Student to upload completed evaluation form and handout via Learning Modules in Evalue by the last Thursday of rotation
5. Interventions (graded by APPE Director)
   a. Submit 20 complete interventions via PxDx in Evalue by the last Thursday of rotation
   b. APPE Director will review for completeness and quantity requirement and assign grade
6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade at midpoint that does not count towards the final grade on a transcript. The grade received at midpoint evaluation will be utilized for student self-reflection and to set goals for the second remaining half of the rotation. Students will receive a final grade on the last day of the APPE that will be transferred to the student’s transcript. Grading occurs via an automatic calculation present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%
A total of 500 APPE points may be achieved upon completion of PHAR 5686 Psychiatry Inpatient rotation. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:

<table>
<thead>
<tr>
<th></th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final evaluation from preceptor</td>
<td>300</td>
</tr>
<tr>
<td>Assignments (from preceptor)</td>
<td>100</td>
</tr>
<tr>
<td>Practice Experiential Director Grade*</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>500</strong></td>
</tr>
</tbody>
</table>

In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation
*Practice Experiential Director Grade = Accountability and responsibility points

Grading Scale:
A letter grade is assigned based on the total points earned

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Total APPE rotation points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>450 - 500 points</td>
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<tr>
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<td>60 – 69% repeat APPE</td>
</tr>
<tr>
<td>F</td>
<td>Less than 325 points</td>
<td>Below 65% - repeat APPE</td>
</tr>
</tbody>
</table>

To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines

Areas of emphasis (Topic may be adjusted based on preceptor’s discretion and/or patient population at site)
1. Schizophrenia (antipsychotic drugs)
2. Drug-Induced Movement Disorders
3. Depression (antidepressants)
4. Bipolar disorder (“mood stabilizing” medications)
5. Anxiety Disorders (antianxiety medications)
6. Obsessive-compulsive and related disorders
7. Stressor / trauma related disorders (PTSD)
PHAR 5694 PEDIATRICS

HOURS CREDIT:  6 hours

COURSE PURPOSE:

The goal of Pediatrics Advanced Pharmacy Practice Experience (APPE) rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) and apply them in direct patient care activities in a hospital and health-system setting. The student will become familiar with the role of the pediatric pharmacist, common pediatric disease states, weight-based dosing, therapeutic drug monitoring, and parenteral nutrition. The student will actively participate in daily multi-disciplinary rounds and will develop patient specific care plans. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to interviewing patients and/or caregiver(s), order review; drug therapy monitoring; evaluating literature, interpreting data, assessing drug therapy, making recommendations for and monitoring drug therapy, and understanding and utilizing the evidence-based principles of medicine needed to develop an optimal therapeutic plan for pediatric patients.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of rotation, the student will be able to

1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
5. Collaborate with other interprofessional team members
6. Apply pharmacy practice management skills related to medication resources and informatics
7. Manage and prioritize patient care activities and workload
8. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
9. Display professional behavior, self-awareness, advocacy, and commitment to the profession
ASSESSMENTS:
1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Journal Club Evaluation
   a. Preceptor to evaluate and assign grade using school-approved Journal Club evaluation rubric
   b. Student to upload completed evaluation form and handout via Learning Modules in Evalue by the last Thursday of rotation
5. Interventions (graded by APPE Director)
   i. Submit 20 complete interventions via PxDx in Evalue by the last Thursday of rotation
   b. APPE Director will review for completeness and quantity requirement and assign grade
6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade at midpoint that does not count towards the final grade on a transcript. The grade received at midpoint evaluation will be utilized for student self-reflection and to set goals for the second remaining half of the rotation. Students will receive a final grade on the last day of the APPE that will be transferred to the student’s transcript. Grading occurs via an automatic calculation present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%
A total of 500 APPE points may be achieved upon completion of PHAR 5694 Pediatrics APPE. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:

<table>
<thead>
<tr>
<th>Description</th>
<th>Points</th>
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</tbody>
</table>

In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation

*Practice Experiential Director Grade = Accountability and responsibility points

**Grading Scale:**
A letter grade is assigned based on the total points earned

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To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines

Suggested readings/resources:
2. American Academy of Pediatrics (AAP) - [www.aap.org](http://www.aap.org)
PHAR 5695 GERIATRICS INPATIENT

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The goal of Geriatrics Inpatient Advanced Pharmacy Practice Experience (APPE) elective rotation is to provide a clinical pharmacy practice environment for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) and apply them in direct patient care activities in a hospital and health-system setting. The student will be expected to utilize, refine and apply pharmacology, pharmacokinetics, pathophysiology and therapeutics to enhance the quality of pharmaceutical care of the elderly. Using the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacist Patient Care Process, students will actively participate in direct patient care, including but not limited to interviewing patients and/or caregiver(s), order review; drug therapy monitoring; evaluating literature, interpreting data, assessing drug therapy, making recommendations for and monitoring drug therapy, and understanding and utilizing the evidence-based principles of medicine needed to develop an optimal therapeutic plan for geriatric patients.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of rotation, the student will be able to
1. Demonstrate proficiency in foundational sciences related to health care and pharmacotherapy
2. Demonstrate ability to evaluate and review data, and assimilate scientific evidence to improve patient care and/or the medication-use system
3. Provide safe and effective patient care to a diverse patient population, following a consistent Joint Commission of Pharmacy Practitioners (JCPP) pharmacist patient care process in collaboration with the health care team
4. Ensure continuity of care during patient transitions between care settings
5. Collaborate with other interprofessional team members
6. Apply pharmacy practice management skills related to medication resources and informatics
7. Manage and prioritize patient care activities and workload
8. Communicate with diverse patient populations, caregiver(s), and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
9. Display professional behavior, self-awareness, advocacy, and commitment to the profession

ASSESSMENTS:
1. Preceptor mid rotation evaluation (Formative)

2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor

3. Intern Self-Evaluation (Start, mid, end of rotation)

4. Journal Club Evaluation
   a. Preceptor to evaluate and assign grade using school-approved Journal Club evaluation rubric
   b. Student to upload completed evaluation form and handout via Learning Modules in Evalue by the last Thursday of rotation

5. Interventions (graded by APPE Director)
   i. Submit 20 complete interventions via PxDx in Evalue by the last Thursday of rotation
   b. APPE Director will review for completeness and quantity requirement and assign grade

6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade at midpoint that does not count towards the final grade on a transcript. The grade received at midpoint evaluation will be utilized for student self-reflection and to set goals for the second remaining half of the rotation. Students will receive a final grade on the last day of the APPE that will be transferred to the student’s transcript. Grading occurs via an automatic calculation present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%
A total of 500 APPE points may be achieved upon completion of PHAR 5695 Geriatrics Inpatient APPE. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:

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<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>500</strong></td>
</tr>
</tbody>
</table>

In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation
*Practice Experiential Director Grade = Accountability and responsibility points

**Grading Scale:**
A letter grade is assigned based on the total points earned

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<tr>
<th>Letter Grade</th>
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</tbody>
</table>

To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines

**Area of emphasis** (Topic may be adjusted based on preceptor’s discretion due to patient population at rotation site)
1. Polydiagnoses/polypharmacy
2. Dementia/Confusion
3. Incontinence
4. Depression/CNS disorders
5. Constipation/diarrhea
6. Diabetes
7. Pain
8. Parkinson's disease
9. Insomnia
10. COPD
11. Cardiovascular
12. Rheumatoid/Osteoarthritis
13. Stroke / TIA
14. Osteoporosis
15. Malnutrition
16. Pressures ulcers

**Suggested readings/resources:**
2. Beers Criteria Update Expert Panel
PHAR 5645 PHARMACY INFORMATICS

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The Pharmacy Informatics Advanced Pharmacy Practice Experience (APPE) is an elective rotation that focuses on the application of technology for pharmacists in supporting, streamlining, improving workflow and increasing patient safety with best practices and reliable systems. The goal of Pharmacy Informatics APPE is to provide opportunities for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) in a hospital and health-system setting. The rotation is designed to allow students to integrate reliable drug and dosage-form knowledge into the medication-use cycle and presents it to clinical decision-makers in interpretable forms that improve outcomes. Activities to enhance learning may include exposure to computerized prescriber order entry systems, pharmacy order entry systems, barcoded medication administration systems (BCMA), automated dispensing systems, automation/robotics, drug and clinical databases, electronic health records and clinical decision support.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:
Upon completion of rotation, the student will be able to
1. Apply principles of pharmacy practice management to pharmacy operations
2. Apply knowledge of local, state, and federal law and regulations
3. Identify opportunities for improving the safety and quality of the medication-use system through the application of informatics principles, standards, and best practices.
4. Manage and prioritize activities and workload
5. Apply pharmacy practice management skills related to informatics
6. Communicate with a diverse audience of health care professionals in face to face, written or electronic media
7. Display professional behavior, self-awareness, advocacy, and commitment to the profession

ASSESSMENTS:
1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Presentation
a. Preceptor to grade using school-approved presentation evaluation rubric  
b. Student to upload completed evaluation form and handout (if using) via Learning  
   Modules in Evalue by the last Thursday of rotation  

5. Written assignment  
a. Preceptor to assign type of written assignment (drug information question,  
literature review, monograph, etc)  
b. Preceptor to evaluation and grade written assignment  
c. If drug information inquiry, preceptor to evaluate and grade using school-  
   approved Drug Information Inquiry rubric  
d. Student to upload completed evaluation form and handout via Learning Modules  
   in Evalue by the last Thursday of rotation  

6. Practice Experiential Director Grade  

Other Required Documents:  
1. Hours logged properly (240 hours minimum logged)  
a. Hours must be verified by preceptors  
2. Student of Site Evaluation  
3. Student of Preceptor Evaluation  

Grading Procedures:  
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade  
at midpoint that does not count towards the final grade on a transcript. The grade received at  
midpoint evaluation will be utilized for student self-reflection and to set goals for the second  
remaining half of the rotation. Students will receive a final grade on the last day of the APPE  
that will be transferred to the student’s transcript. Grading occurs via an automatic calculation  
present in electronic evaluations in E-Value.  

Grading criteria is competency based. Minimal passing performance is 70%  
A total of 500 APPE points may be achieved upon completion of PHAR 5645 Pharmacy  
Informatics. These points are composed of scores as delineated below. The following maximum  
point values may be achieved in each of the areas:  

<table>
<thead>
<tr>
<th>Evaluation Type</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final evaluation from preceptor</td>
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<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
</tr>
</tbody>
</table>

In order to receive a passing grade for the rotation the student  
1. Must NOT receive four (4) or more “2” ratings on the end of rotation  
   evaluation  
2. Must NOT receive a “1” rating on the end of rotation evaluation  

*Practice Experiential Director Grade = Accountability and responsibility points
Grading Scale:

A letter grade is assigned based on the total points earned**

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<thead>
<tr>
<th>Letter Grade</th>
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</table>

**To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines

Suggested resources:

PHAR 5646 MEDICATION SAFETY

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The Medication Safety Advanced Pharmacy Practice Experience (APPE) is an elective rotation that will help students become familiar with the key principles utilized in hospitals and health systems to improve medication safety. The goal of the Medication Safety APPE is to provide opportunities for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experiences (IPPE). The rotation is designed to expose students to medication safety nomenclature, key principles, tools, and available resources. The student will participate in several activities designed to improve the student’s working knowledge and experience with medication safety concepts. The rotation will enable the student to apply knowledge in any pharmacy practice setting to improve medication safety for patients.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of Medication Safety APPE, the student will be able to

1. Demonstrate understanding of system-based approach to improve medication-use safety
2. Perform a systematic approach to medication error and safety
3. Collaborate with interprofessional team members to optimize medication safety
4. Manage and prioritize activities and workload
5. Apply pharmacy practice management skills related to medication resources and informatics
6. Communicate with diverse audience of healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
7. Display professional behavior, self-awareness, advocacy, and commitment to the profession

ASSESSMENTS:

1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Presentation
   a. Preceptor to grade using school-approved presentation evaluation rubric
   b. Student to upload completed evaluation form and handout (if using) via Learning Modules in Evalue by the last Thursday of rotation
5. Written assignment
   a. Preceptor to assign type of written assignment (drug information question, literature review, monograph, etc)
   b. Preceptor to evaluation and grade written assignment
   c. If drug information inquiry, preceptor to evaluate and grade using school-approved Drug Information Inquiry rubric
   d. Student to upload completed evaluation form and handout via Learning Modules in Evalue by the last Thursday of rotation

6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade at midpoint that does not count towards the final grade on a transcript. The grade received at midpoint evaluation will be utilized for student self-reflection and to set goals for the second remaining half of the rotation. Students will receive a final grade on the last day of the APPE that will be transferred to the student’s transcript. Grading occurs via an automatic calculation present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%
A total of 500 APPE points may be achieved upon completion of PHAR 5646 Medication Safety APPE. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:

<table>
<thead>
<tr>
<th>Evaluation Area</th>
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In order to receive a passing grade for the rotation the student
1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation

*Practice Experiential Director Grade = Accountability and responsibility points
**Grading Scale:**

A letter grade is assigned based on the total points earned**

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**To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines
PHAR 5663 PHARMACY MANAGEMENT (HOSPITAL)

HOURS CREDIT: 6 hours

COURSE PURPOSE:

The goal of the Pharmacy Management (Hospital) Advanced Pharmacy Practice Experience (APPE) is to provide opportunities for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experiences (IPPE) and apply them in an administrative and/or managerial aspects of a hospital or health system pharmacy. Throughout the elective rotation, students will be actively involved in the day-to-day pharmacy administration activities (strategic planning, problem-solving, leadership initiatives) and will become familiar with the decision-making processes that simultaneously maximize the financial performance and the patient safety goals of the pharmacy department. The experience will include discussions and/or exposure to automation and computerization, human resources, quality improvement initiatives and pharmacoeconomics. It is expected that the rotation will help students in their future practice by integrating managerial functions and processes introduced throughout the rotation with their current knowledge in the clinical sciences and communication skills.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of rotation, the student will be able to

1. Apply principles of pharmacy practice management to pharmacy operations
2. Apply knowledge of local, state, and federal law and regulations
3. Demonstrate ability to evaluate and investigate practice, review data, and assimilate scientific evidence to improve patient care and/or the medication use system
4. Manage and prioritize activities and workload
5. Apply pharmacy practice management skills related to human resources, medication resources, informatics, pharmacy workload and financial performance
6. Demonstrate leadership skills
7. Communicate with a diverse audience of health care professionals in face to face, written or electronic media
8. Display professional behavior, self-awareness, advocacy, and commitment to the profession

ASSESSMENTS:

1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Presentation
   a. Preceptor to grade using school-approved presentation evaluation rubric
   b. Student to upload completed evaluation form and handout (if using) via Learning Modules in Evalue by the last Thursday of rotation
5. Written assignment
   a. Preceptor to assign type of written assignment (drug information question, literature review, monograph, etc)
   b. Preceptor to evaluate and grade written assignment
   c. If drug information inquiry, preceptor to evaluate and grade using school-approved Drug Information Inquiry rubric
   d. Student to upload completed evaluation form and handout via Learning Modules in Evalue by the last Thursday of rotation
6. Leadership Reflective Writing Assignment (graded by APPE Director)
7. Practice Experiential Director Grade

**Other Required Documents:**
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

**Leadership reflective writing assignment: My Leadership Style**
Due date – Monday 5 pm before Oncampus day for APPE 1 – 6; APPE 7: March 27, 2017. Upload assignment to Evalue MyFolio – Professionalism
- To promote professionalism and punctuality, assignments submitted by the deadline will have the opportunity to receive all points. Late assignments will be marked with a 5% deduction.

Complete a one page paper reflecting on the leadership style you would like to promote and the rationale for that chosen leadership style. Include in your paper two areas on the leadership self-assessment survey that you would like to improve on, rationale in choosing the two areas, and your action plan on how to improve on those areas.

In your reflection process, consider the chapter reading assignment, leadership self-assessment results, Pharmacy Forecast 2016-2020 document, and the leadership environment/personnel that you have experienced on rotation.

2. Complete a leadership self-assessment on the ASHP Foundation Leadership Website: [http://www.ashpfoundation.org/selfassessment/](http://www.ashpfoundation.org/selfassessment/)
**Grading Procedures:**
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade at midpoint that does not count towards the final grade on a transcript. The grade received at midpoint evaluation will be utilized for student self-reflection and to set goals for the second remaining half of the rotation. Students will receive a final grade on the last day of the APPE that will be transferred to the student’s transcript. Grading occurs via an automatic calculation present in electronic evaluations in E-Value.

Grading criteria is competency based. Minimal passing performance is 70%

A total of 500 APPE points may be achieved upon completion of PHAR 5663 Pharmacy Management (Hospital) APPE. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:

<table>
<thead>
<tr>
<th>Area</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final evaluation from preceptor</td>
<td>300</td>
</tr>
<tr>
<td>Assignments (from preceptor)</td>
<td>100</td>
</tr>
<tr>
<td>Practice Experiential Director Grade*</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
</tr>
</tbody>
</table>

In order to receive a passing grade for the rotation the student

1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
2. Must NOT receive a “1” rating on the end of rotation evaluation

*Practice Experiential Director Grade = Accountability and responsibility points, writing assignment

**Grading Scale:**

A letter grade is assigned based on the total points earned**

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Total APPE rotation points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>450 - 500 points</td>
<td>90 – 100%</td>
</tr>
<tr>
<td>B</td>
<td>400 – 449 points</td>
<td>80 – 89%</td>
</tr>
<tr>
<td>C</td>
<td>350 – 399 points</td>
<td>70 - 79%</td>
</tr>
<tr>
<td>D</td>
<td>325 – 349 points</td>
<td>60 – 69% repeat APPE</td>
</tr>
<tr>
<td>F</td>
<td>Less than 325 points</td>
<td>Below 65% - repeat APPE</td>
</tr>
</tbody>
</table>

**To obtain a grade of C or better the student must:
1. Follow honor code and guidelines of the Internship and Attendance Policies
2. Complete all assignments
3. Complete all required course evaluations (preceptor, site, and intern)
4. Submit all required rotation paperwork by the appropriate deadlines

**Required reading:**

**Suggested reading and other resources:**

PHAR 5691 DRUG INFORMATION

HOURS CREDIT: 6 hours

COURSE PURPOSE:

Drug Information is a six-week elective rotation providing opportunities for students to integrate, apply, reinforce the knowledge, skills, attitudes, abilities, and behaviors acquired through didactic education and Introductory Pharmacy Practice Experience (IPPE) in a hospital and health-system setting. The goal of the Drug Information Advanced Pharmacy Practice Experience (APPE) is to provide experience and understanding of the philosophy and scope of a Drug Information Center (DIC), as well as develop competency in the use of drug information systems, application of the primary drug literature in responding to drug information requests, and effective oral and written communication skills.

Interprofessional Experience: The pharmacist is a member of an interdisciplinary team that serves the patient’s interest above all other concerns. Team members may include pharmacists, physicians, physician assistants, nurse practitioners, nurses, and other healthcare providers. This experience may be directed and evaluated by one or more preceptors.

PROFICIENCIES:

Upon completion of rotation, the student will be able to

1. Apply pharmacotherapy principles and foundational knowledge to deliver patient-centered care.
2. Apply knowledge of the structural and functional dimensions of a Drug Information Service.
3. Apply pharmacy practice management skills related to informatics
4. Manage and prioritize patient care activities and workload
5. Communicate with diverse patient populations, caregiver(s) and/or healthcare professionals utilizing a face-to-face, written or electronic media to reach optimal outcomes
6. Displays professional behavior, self-awareness, advocacy, ad commitment to the profession

ASSESSMENTS:

1. Preceptor mid rotation evaluation (Formative)
2. Preceptor end of rotation evaluation (Summative)
   a. Preceptor rotation evaluation score
   b. Assignment score (provided by preceptor)
      i. Numerical average of all assignments assigned by preceptor
3. Intern Self-Evaluation (Start, mid, end of rotation)
4. Presentation
   a. Preceptor to grade using school-approved presentation evaluation rubric
   b. Student to upload completed evaluation form and handout (if using) via Learning Modules in Evalue by the last Thursday of rotation
5. Written assignment
   a. Preceptor to assign type of written assignment (drug information question, literature review, monograph, etc)
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6. Practice Experiential Director Grade

Other Required Documents:
1. Hours logged properly (240 hours minimum)
   a. Hours must be verified by preceptors
2. Student of Site Evaluation
3. Student of Preceptor Evaluation

Grading Procedures:
Grading will occur via electronic APPE evaluations on E-Value. Students will receive a grade at midpoint that does not count towards the final grade on a transcript. The grade received at midpoint evaluation will be utilized for student self-reflection and to set goals for the second remaining half of the rotation. Students will receive a final grade on the last day of the APPE that will be transferred to the student’s transcript. Grading occurs via an automatic calculation present in electronic evaluations in E-Value.
Grading criteria is competency based. Minimal passing performance is 70%
A total of 500 APPE points may be achieved upon completion of PHAR 5691 Drug Information APPE. These points are composed of scores as delineated below. The following maximum point values may be achieved in each of the areas:

| Final evaluation from preceptor | 300 points |
| Assignments (from preceptor)   | 100 points |
| Practice Experiential Director Grade* | 100 points |
| Total                           | 500 points |

In order to receive a passing grade for the rotation the student
   1. Must NOT receive four (4) or more “2” ratings on the end of rotation evaluation
   2. Must NOT receive a “1” rating on the end of rotation evaluation

*Practice Experiential Director Grade = Accountability and responsibility points

Grading Scale:
A letter grade is assigned based on the total points earned**

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**To obtain a grade of C or better the student must:**

a. Follow honor code and guidelines of the Internship and Attendance Policies  
b. Complete all assignments  
c. Complete all required course evaluations (preceptor, site, and intern)  
d. Submit all required rotation paperwork by the appropriate deadlines