PHM 182R - Pharmacotherapeutics of Vaccine-Preventable Diseases
Spring 2020

Course Coordinator: Sharon Rush, RPh
Email: sharon.rush@austin.utexas.edu
Phone: 512-232-3463
Office: PHR 5.218E
Office Hours: By appointment

Course Unique Number(s): 57585, 57590

Classroom(s): PHR 4.212

Class Days/Times:
Lecture:
  - 57585 – Mondays from 9am to 9:50am
  - 57590 – Mondays from 11am to 11:50am
Course Information

Course Description:
This certificate training course focuses on preparing student-pharmacists to provide safe and accurate immunization services to their patients that will promote disease prevention and public health. It provides student-pharmacists with immunization-related knowledge, skills and resources based on national immunization standards through the Centers for Disease Control and Prevention.

Course Prerequisites/Co-Requisites:
Completion of the fall semester of the first professional year in the College of Pharmacy.

Course Learning Objectives (CAPE Objectives):
There are two sets of learning objectives in this course:

- The American Pharmacists’ Association (APhA) Pharmacy-Based Immunization Delivery certificate course
- Immunization-related additional topics not covered in the APhA certificate course

APhA Pharmacy-Based Immunization Delivery Certificate Course Objectives:
Self-Study Component Learning Objectives: The self-study learning activity is designed to ensure that all student-pharmacists have an understanding of vaccine-preventable diseases and the role of pharmacists as vaccine advocates and administrators. There are five learning modules that present in-depth information on immunology, practice implementation, and legal / regulatory issues with appropriate references to the Centers for Disease Control and Prevention (CDC) resource publication, Epidemiology and Prevention of Vaccine-Preventable Disease. The self-study program includes a self-assessment test and real-life case studies designed to help reinforce and evaluate the student-pharmacist’s understanding of key information and concepts.

- Module 1 – Pharmacists, Vaccines and Public Health
  o Describe the effects of immunizations on morbidity and mortality rates of vaccine-preventable diseases in the U.S.
  o Discuss Healthy People 2020 goals for vaccination rates in the U.S.
  o Explain the expansion of the pharmacist’s role as vaccine providers and describe the status of pharmacists’ authorization to administer vaccines throughout the U.S.
  o Describe strategies for pharmacists to advocate for pharmacy-based delivery of vaccines.
  o Discuss the pharmacist’s role as immunizers in emergency preparedness activities.
  o Identify resources that are useful for immunization providers and educators.
- Module 2 – Overview of Immunology and Vaccine Development
  o Identify the differences between active and passive immunity and describe key elements of each process.
Explain how vaccines elicit an immune response and provide protection from disease.

- Describe the characteristics of and distinctions among live vaccines, inactivated vaccines, polysaccharide vaccines and recombinant vaccines.
- Discuss the rationale for timing of vaccine administration and intervals between doses, including vaccine-vaccine spacing and vaccine-antibody spacing.
- Describe principles of herd immunity.

**Module 3 – Vaccine-Preventable Diseases**

- Describe the epidemiology, clinical features, and potential complications of diseases that can be prevented with vaccines. These will include adult and childhood vaccines.
- Identify vaccines available in the U.S. market for each vaccine-preventable disease and describe their features. These will include adult and childhood vaccines.
- Identify the contraindications and precautions for the use of vaccines available in the U.S.
- Use recommendations from the Advisory Committee on Immunization Practices (ACIP) to identify target groups for receipt of each vaccine. These will include adult and childhood vaccines.

**Module 4 – Patient Care Considerations for Immunizing Pharmacists**

- Explain how to apply the pharmacists’ patient care process to immunization services.
- Identify patients with immunization needs. These will include adult and childhood vaccines.
- Given a patient case, select appropriate vaccines using an immunization schedule from ACIP and identify appropriate timing, doses, and routes of administration. These will include adult and childhood vaccines.
- Recall recommended patient screening questions for vaccination and identify valid contraindications for vaccinations.
- Educate patients about the benefits of vaccines and address common concerns about vaccines.
- Provide accurate information that addresses common myths about vaccines.
- Describe the role of the Vaccine Adverse Event Reporting System (VAERS) in managing vaccine safety.
- Educate patients about the potential adverse reactions following the receipt of a vaccine and how to manage them.
- Explain appropriate techniques for intramuscular, subcutaneous, intradermal, and intranasal administration of vaccines.
- Describe the signs and symptoms of adverse reactions to vaccines and procedures that pharmacists should follow to manage various adverse reactions.
- Describe appropriate documentation and follow-up after vaccine administration.

**Module 5 – Operating a Pharmacy-Based Immunization Program**

- Describe important considerations when deciding which vaccines to offer.
- Describe physical space requirements for a vaccine service.
Discuss Occupational Safety and Health Administration (OSHA) regulations for the prevention of employee exposure to bloodborne pathogens and needlestick injury at worksites where immunizations are administered.

- Outline principles and procedures for vaccine storage and handling.
- Discuss workflow options for administering vaccines in pharmacy practice.
- Identify marketing strategies that can be used to promote a pharmacy-based immunization service.
- Explain potential options for obtaining reimbursement and compensation for vaccines and vaccine administration.
- Describe liability issues related to vaccine administration, including the Vaccine Injury Compensation Program.

**Live Seminar Learning Objectives:** The second component of APhA’s immunization certificate course is the active learning seminar which focuses on pharmacy practice implementation. The live portion is based on the experience of practitioners involved in immunization advocacy and administration. It will reinforce and expand on the self-study program. Participants will be assessed on intramuscular and subcutaneous injections.

- Describe strategies for increasing immunization rates, including physician collaborations, community level activities and immunization coalition activities.
- Describe pharmacy operations and a process for administering vaccines in various pharmacy practice settings.
- Evaluate patient histories and make patient-specific recommendations based on the appropriate immunization schedule.
- Demonstrate effective strategies for communicating with patients who have concerns about vaccines.
- Describe current evidence regarding vaccine safety.
- Recognize the signs and symptoms of adverse reactions that can occur after vaccination.
- Describe procedures for management of patients with adverse reactions to vaccination that constitute an emergency.
- List the steps for administering currently available intranasal and intradermal vaccines.
- Demonstrate appropriate intramuscular and subcutaneous injection techniques for adult immunization.

**Immunization-Related Additional Objectives:**

**Immune globulins**

- Describe the differences between immune globulins and vaccines.
- Make patient-specific immune globulin recommendations based on ACIP guidelines.
- Discuss the rationale for timing of vaccine administration and intervals between doses based on vaccine-immune globulin spacing.
Childhood vaccination technique

- In addition to the childhood vaccine-related objectives above, list the steps for administering intramuscular, subcutaneous, intranasal, intradermal and oral routes in infants and children.

Vaccine Administration

- Describe techniques used to administer multiple vaccines at a single visit.

ImmTrac2 Texas State Immunization Registry

- Review the ImmTrac2 Texas Immunization registry website and related laws
- Identify key challenges with the ImmTrac2 registry
- Discuss best practices of how to incorporate ImmTrac2 registry reporting into workflow

Cape Domains:

Domain 1 – Foundational Knowledge
1.1 Learner (Learner) – Develop, integrate, and apply knowledge from the foundational sciences to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient-centered care.

Domain 2 – Essentials for Practice and Care
2.1 Patient-centered care (Caregiver) – Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).
2.3 Health and wellness (Promoter) – Design prevention, intervention, and educational strategies for individuals and communities to manage chronic disease and improve health and wellness.
2.4 Population-based care (Provider) – Describe how population-based care influences patient-centered care and influences the development of practice guidelines and evidence-based best practices.

Domain 3 – Approach to Practice and Care
3.1 Problem solving (Problem Solver) – Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution.
3.2 Educator (Educator) – Educate all audiences by determining the most effective and enduring ways to impart information and assess understanding.
3.3 Patient advocacy (Advocate) – Assure that patients’ best interests are represented.
3.5 Cultural sensitivity (Includer) – Recognize social determinants of health to diminish disparities and inequities in access to quality care.
3.6 Communication (Communicator) – Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.

Domain 4 – Personal and Professional Development
4.4 Professionalism (Professional) – Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society.
**Course Success:**
Specific online APhA modules need to be reviewed prior to each class. The class session format is a review of the topics with interactive Q&A. Attendance and active participation in class discussions will provide students with the opportunity to seek clarification and readily apply the material.

**Course Website:**

**Canvas Learning Management System:** This course uses Canvas, a Web-based course management system in which a password-protected site is created for each course. Canvas will be used to distribute course materials, to communicate, and to post grades. Canvas is available at [http://canvas.utexas.edu](http://canvas.utexas.edu). Support is provided by the ITS Help Desk at 475-9400 Monday through Friday 8 am to 6 pm.

**APhA website:** This course utilizes the APhA Pharmacy-Based Immunization Delivery certificate training program website and materials at [www.pharmacist.com](http://www.pharmacist.com). All students must obtain their own APhA account since APhA ties the cost of the program materials to the certificate. Web links and voucher codes will be provided to you by the course instructor via Canvas.

**Course Communications:**
Official course communications will take place in class, through e-mail and on the course Canvas website. Students are advised to configure their Canvas settings to forward course announcements to their official e-mail address. Canvas uses only the e-mail address listed on the official University of Texas directory, so please check the University’s online directory to ensure your e-mail address is listed correctly.

**Course Video Recordings:**
A video capture system will be used in this course. The video streams are offered as a supplement to lecture attendance, not as a substitute. Therefore, if technical problems preclude recording the lecture, the lecture will **not** be re-recorded, but students are still responsible for the content of the lecture. Lecture recordings will be available to you for the balance of the semester unless otherwise specified. Do not expect to have access after the semester is over.

Faculty and students utilizing class video recordings should be careful to not compromise the privacy of either themselves or other users ([http://registrar.utexas.edu/students/records/ferpa](http://registrar.utexas.edu/students/records/ferpa)), or the rights of the presenter. Students are free to make their own recordings of lectures unless specifically prohibited from doing so by the presenter. Any additional distribution of College- or student-generated recordings (regardless of format) is prohibited without the written and signed permission of the presenter and students identifiable on the recording. Likewise, all course materials developed by the faculty member (handouts, PowerPoints, etc.) are the intellectual property of that faculty member and cannot be distributed further without the permission of that faculty member.

Viewing video-streamed recordings of lectures can be streamed on campus or can be viewed off-campus using a DSL broadband connection. Your faculty are not in a position to troubleshoot your video-streaming problems, so please do not ask them to do so; rather, you should access the LRC’s help website at [https://www.utexas.edu/pharmacy/help/](https://www.utexas.edu/pharmacy/help/) to address those problems. You will find additional information about the lecture capture system or can report technical issues at [http://sites.utexas.edu/phr-lrc/](http://sites.utexas.edu/phr-lrc/)
Course Grading Policies:
To prove mastery of concepts and to achieve a passing grade, all students will be expected to meet or exceed an overall grade of 60%. Students not meeting or exceeding an overall grade of 60% will receive a failing grade and be considered for academic probation according to University of Texas College of Pharmacy Policy. http://catalog.utexas.edu/undergraduate/pharmacy/academic-policies-and-procedures/

Course Grade:
NOTE: Student-pharmacists MUST pass the Screening questions OSCE, Administration technique OSCE and the APhA online component in order to pass the course.

Letter grades will be assigned according to the following scale:

<table>
<thead>
<tr>
<th>Score</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>89.50-100</td>
<td>A</td>
</tr>
<tr>
<td>79.50-89.49</td>
<td>B</td>
</tr>
<tr>
<td>69.50-79.49</td>
<td>C</td>
</tr>
<tr>
<td>59.50-69.49</td>
<td>D</td>
</tr>
<tr>
<td>&lt;59.50</td>
<td>F</td>
</tr>
</tbody>
</table>

Rounding of grades will be addressed on an individual basis by the course instructor.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage of Total Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>20%</td>
</tr>
<tr>
<td>Attendance</td>
<td>20%</td>
</tr>
<tr>
<td>Screening Questions OSCE</td>
<td>20%</td>
</tr>
<tr>
<td>Administration Technique OSCE</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Lecture attendance

<table>
<thead>
<tr>
<th>Perfect attendance</th>
<th>2.5% Bonus</th>
</tr>
</thead>
<tbody>
<tr>
<td>First absence</td>
<td>No penalty</td>
</tr>
<tr>
<td>Second and each subsequent absence</td>
<td>2.5% Penalty</td>
</tr>
<tr>
<td>Mandatory attendance days</td>
<td>One letter grade per absence</td>
</tr>
</tbody>
</table>
### Quizzes

<table>
<thead>
<tr>
<th>Quiz Type</th>
<th>Penalty/Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass all quizzes (≥60%)</td>
<td>2.5% Bonus</td>
</tr>
<tr>
<td>First failed quiz (≤60%)</td>
<td>No penalty</td>
</tr>
<tr>
<td>Second and each subsequent failed quiz</td>
<td>2.5% Penalty</td>
</tr>
</tbody>
</table>

### Assignments:

**APhA Pharmacy-Based Immunization Delivery certificate course:**

- **Assessments** – Must obtain a grade of 70% or higher. Participants are allowed two opportunities to successfully complete the assessment. A third attempt will not be permitted and will result in a failure of the APhA certificate course.
- **Pre-assessment** – 15 questions. This is meant to measure prior knowledge. It is acceptable to “fail” this assessment. Participants have only one opportunity to take this assessment. They must complete this before accessing the self-study materials.
- **Self-Study assessment** – 80 questions. Participants will receive feedback once they have completed the assessment.
- **Final assessment** – 45 questions. Participants will receive feedback once they have completed the assessment.
- **Injection technique assessment**
- **Completion of online assessment and evaluation of live sessions**

**NOTE:** It is a requirement to pass all of the online components of the APhA course. Exam scores from the self-study and final assessments do not contribute to the overall course score. It is possible to obtain the APhA Immunization certificate and fail this curriculum course. It is not possible to pass the curriculum course if you fail the APhA online course requirements.

**Quizzes:** Weekly quizzes will be administered during the regularly scheduled lecture time and will cover material from the APhA modules and lecture material. The quizzes are pass/fail with 60% being used as the cut off point for scores.

UT Intrapolll questions incorporated into lecture to assess student comprehension of key concepts covered in lecture that day. Students will be given an opportunity to answer all the questions again at the end of the lecture. The final score will be used as the quiz score for that day.

Each student is allowed one excused missed quiz during the semester without penalty. Any unexcused missed quiz will result in a 5% reduction in the final course score. Each student is allowed one quiz score ≤60% without penalty. Each additional quiz score ≤60% will result in a 2.5% reduction in the final course grade. Each student who achieves a score of ≥60% on all administered quizzes will receive a 2.5% bonus on their final course grade.

**OSCEs:** Two objective structured clinical examinations (OSCEs) will be administered during the last weeks of class to assess the application of the skills learned to real-life scenarios. Students will be
randomly scheduled to complete the OSCEs. All students are required to score ≥70% on each OSCE. Failure to do so will result in a repeated examination. Students scoring ≤70% on the second attempt will fail the course. If a student is required to repeat an OSCE, the original score will be used in the calculation of the final grade. Failure of either OSCE will result in a failure of the course.

**Cumulative Final Exam:** Questions for the cumulative final exam will come from class sessions and APhA online modules. The exam may consist of multiple-choice, true / false, matching, or fill-in-the-blank questions and will be conducted in ExamSoft®.

- Late arrival for exams (15 minutes after the beginning of the exam or after any students have left the room, whichever comes first) will not be permitted. A grade of zero will be given unless a verifiable emergency has caused the late arrival.
- Students will **NOT** be permitted to leave the room and return once an exam has started unless it is a verifiable emergency. Please take a restroom break before the exam begins. Any items that might be needed during an exam, such as tissues or water, should be brought into the exam room with the student.
- Make-up exams will be administered **ONLY** in the case of a verifiable emergency, serious illness or other excused absence approved in advance by Prof Rush through the student’s submission of the “Student Request for Alternative Examination Time” form. This form is available on the 5th floor of the South Building.
- Reconsideration requests are not accepted. If any of the questions are assessed to be “poor questions” based on an analysis of the exam, it is the prerogative of the instructor to discard the question(s) from the exam or accept additional answers. If a student has questions regarding any of the subject matter tested, they are encouraged to talk with Prof Rush.

**Attendance:**

**Class Attendance:**

- As a required course in a professional curriculum, attendance is required for all lecture sessions. In addition, APhA requires participants in the program to attend ALL components of the live seminar materials.
- Lecture attendance will be taken each week. Since illnesses and other emergencies may result in unavoidable absences, each student is allowed one absence during the semester without penalty. Each additional absence will result in a reduction in the final grade of 2.5%. Perfect lecture attendance will result in a bonus of 2.5% in the final course grade. It will be the student’s responsibility to master the material covered that day.
- Mandatory attendance is expected for the following subjects: Screening patients, Adverse events, and Injection technique. Your final course grade will be dropped one letter grade for each mandatory attendance class you miss.
- Legitimate excuses for absences are medical emergencies (this excludes notes for doctors’ appointments, dentist appointments, etc.) and religious observances.
Excused Absences:
The only absences that will be considered excused are for religious holy days or extenuating circumstances due to an emergency. If you plan to miss class due to observance of a religious holiday, please let the course coordinator know at least two weeks in advance, preferably at the beginning of the semester. You will not be penalized for this absence, although you will still be responsible for any work you will miss on that day if applicable. Check with the course coordinator for details or arrangements.

Attendance at Professional Meetings:
It is the student’s responsibility to ASK permission IN ADVANCE if they plan to attend a professional meeting that would necessitate missing an exam, assignment, or other required course activity. These types of absences will not be excused and it is at the discretion of the course coordinator as to whether to grant permission and allow the student to make up any missed work.

Required Materials:
APhA online course:
Components are controlled by APhA. Cost will be $95 to the student-intern and will be charged through “What I Owe”. Failure to claim APhA’s authorization code by the assigned date will result in an additional charge to the student-pharmacist via APhA.

• Self-study modules 1 – 5
• Assessments – Pre-assessment, Self-study assessment and Final assessment
• Live component (covered in lecture)

Classroom Expectations:
• Please attend all scheduled class meetings and arrive on time. Arriving late disturbs fellow students and the instructor. You are responsible for ALL material covered in class and ALL announcements made in your absence.
• Please respect your fellow students and the instructors. Excessive talking, distractions and noise can be troublesome for students and instructors. Many times instructors are not aware of noise or distractions. If you have trouble hearing lectures and class discussions due to distractions around you, please inform Professor Rush or the instructor.
• Please let the instructor know immediately of any problem(s) which may prevent you from performing satisfactorily in this class.
• Cell Phones: Cell phones must be put away during class.
• Laptops: Laptop computer use during class is strictly limited to viewing lecture handouts, taking notes and conducting quizzes.
Exam Policies

The following exam policies do NOT apply to the APhA online immunization course assessments. These exam policies apply to the final cumulative exam.

ExamSoft®:
Students are responsible for the maintenance of their approved personal devices and Examplify® software. Students are required to bring approved personal devices and privacy screens for all exam and indicated assignments. Lack of preparation may result in an inability to take the exam, adjustments to course grades at the discretion of course coordinators, and/or an unprofessional conduct referral.

Any problems with Examplify® or ExamSoft® should be addressed via phone to Student Tech Support at 866.429.8889, email to support@examsoft.com, or live chat at www.examsoft.com. Do not expect your faculty to troubleshoot your technology issues.

Students found improperly using ExamSoft® or Examplify® to gain unfair academic advantage are violating the College of Pharmacy Honor Code. Violations such as “academic dishonesty” and/or “professional misconduct” would include, but are not limited to using a classmate’s login/password, tampering with exam files, and falsifying upload or download information, or any attempt to circumvent the security features of the software.

Students should refer to the ExamSoft® Policies Handbook for a complete listing of policies related to exams, quizzes and assignments.

Exam Format:
Exam questions will cover learning objectives given at the beginning of each topic. Exam questions may include: multiple choice, true/false, fill-in-the-blank, matching and/or short answer.

Exam Grading:
Grading of exams, along with statistical analysis and review of exam questions, will be the responsibility of the course coordinator and faculty, who may choose to grant credit for statistically poor questions.

Exam Return:
No examinations will be returned. Exam scores will be posted on the course Canvas site.

Final Exam Review of Old Exams:
Old exams will be not available for review prior to the final. Students should attend the review sessions for the individual exams during the semester.

Final Exam Re-Examination Policy:
There is no final exam reconsideration requests or re-examinations allowed for this course.

Request for an Alternate Exam Time:
No allowances will be made for an exam being missed, other than documented illness or emergency, or by prior approval by the Course Coordinator. An unexcused absence from an exam may result in a grade of "zero" for that exam. Any student requesting accommodation for an upcoming exam must submit the
request to the course coordinator using the online form posted on Canvas® at least one month prior to the exam.

Note the new policy that an alternate exam time will be considered *only* if the student documents that they can’t be physically present on the date the exam is already scheduled.¹

**Academic Integrity:**
Students who violate University rules on academic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. See College Policies and Information, and University Policies and Information for more details.

**Religious Holy Days**
If you will miss a class, an examination, a work assignment or a project in order to observe a religious holy day, you must notify the course coordinator the first week of class so that arrangements for all such students can be made for the full semester.

**Services for Students with Disabilities:**
Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities at 471-6259 (voice) or 232-2937 (video phone) or [https://diversity.utexas.edu/disability/](https://diversity.utexas.edu/disability/). All University rules concerning accommodations must be followed, including the student arranging for special accommodations *prior to each examination*. In the absence of such prearrangement, it will be assumed that the student is not requesting special accommodations for that exam, and will be expected to take the exam with the rest of the class at the regularly scheduled exam time.

Please provide a copy of the letter to the course coordinator and the office of the Associate Dean for Academic Affairs as soon as possible after receipt.
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>APhA Module Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/21-1/24</td>
<td>Classes start on Tuesday – No classes that week</td>
<td></td>
</tr>
</tbody>
</table>
| 1/27 or 1/28 | Class starts  
  - Introduction to course  
  - Basic Vaccine Immunology  
  - Introduction to Vaccines and Immune Globulins | Modules 1 and 2                        |
| 2/3 or 2/4 | Vaccines and their Diseases: Influenza and Tdap                       | Module 3: Pages 1 - 20                 |
| 2/10 or 2/11 | Vaccines and their Diseases: Varicella, Herpes Zoster, HPV, MMR       | Module 3: Pages 21 - 32                |
| 2/17 or 2/18 | Vaccines and their Diseases: Pneumococcal, Meningococcal, Hepatitis A and B | Module 3: Pages 32 - 44                |
| 2/24 or 2/25 | Vaccines and their Diseases: Rotavirus, Hib, Polio, Combination, Non-routine and Future | Module 3: Pages 44 - 53                |
| 3/2 or 3/3  | Vaccine Schedules                                                      | Module 4: Pages 1 - 9                  |
| 3/9 or 3/10 |  
  - Screening Patients  
  - Adverse Events  
  - Communicating with Patients | MANDATORY ATTENDANCE: Module 4: Pages 9 – 20, 24 - 25 |
| 3/16 or 3/17 | Spring break – no classes                                              |                                        |
| 3/23 or 3/24 |  
  - Managing an Immunization Program  
  - Texas Vaccine Exemption Laws  
  - Planning your Program  
  - Documentation | Module 4: Pages 26 – 28  
  Module 5: Pages 1 – 10, 13 - 18 |
| 3/30 or 3/31 |  
  - Staying Up-to-Date  
  - Increasing Vaccination Rates  
  - ImmTrac2 registry | Module 5: Pages 11 - 13                 |
| 4/6 or 4/7  | Injection Technique                                                    | MANDATORY ATTENDANCE: Module 4: Pages 20 - 24 |
| 4/13 or 4/14 | Injection Technique                                                    | MANDATORY ATTENDANCE                   |
| 4/20, 4/21  | Screening patients and Immunization Administration Technique OSCEs    | PHR 4.212 and 3.110                   |
| 4/27, 4/28  | Screening patients and Immunization Administration Technique OSCEs    | PHR 4.212 and 3.110                   |
| 5/4, 5/5    | Screening patients and Immunization Administration Technique OSCEs    | PHR 4.212 and 3.110                   |
| TBA         | Cumulative final exam                                                  | TBA                                    |