New Course Form

https://myuk.uky.edu/sap/bc/soap/rfc?services=

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Attachments:

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<table>
<thead>
<tr>
<th>ID</th>
<th>Attachment</th>
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<tbody>
<tr>
<td>5203</td>
<td>PHR 954 DIFFERENTIAL DIAGNOSIS IN PRIMARY CARE - S</td>
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(*denotes required fields)

1. General Information
   a. * Submitted by the College of: PHARMACY Submission Date: 9/9/2015
   b. * Department/Division: Pharmacy
   c.  
   d. * Requested Effective Date: Semester following approval OR Specific Term/Year Fall 2018
   e. Should this course be a UK Core Course? Yes No
      If YES, check the areas that apply:
      - Inquiry - Arts & Creativity
      - Composition & Communications - II
      - Inquiry - Humanities
      - Quantitative Foundations
      - Inquiry - Nat/Math/Phys Sci
      - Statistical Inferential Reasoning
      - Inquiry - Social Sciences
      - U.S. Citizenship, Community, Diversity
      - Composition & Communications - I
      - Global Dynamics

2. Designation and Description of Proposed Course.
   a. * Will this course also be offered through Distance Learning? Yes No
   b. * Prefix and Number: PHR 954
   c. * Full Title: Differential Diagnosis in Primary Care
   d. Transcript Title (if full title is more than 40 characters):
   e. To be Cross-Listed with (Prefix and Number):
   f. * Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours for each meeting:

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Laboratory</th>
<th>Recitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indep. Study</td>
<td>Clinical</td>
<td>Colloquium</td>
</tr>
<tr>
<td>Research</td>
<td>Residency</td>
<td>Seminar</td>
</tr>
<tr>
<td>Other</td>
<td>If Other, Please explain:</td>
<td></td>
</tr>
</tbody>
</table>

   g. * Identify a grading system:
   - Letter (A, B, C, etc.)
   - Pass/Fail
   - Medicine Numeric Grade (Non-medical students will receive a letter grade)
   - Graduate School Grade Scale
h. * Number of credits:  

i. * Is this course repeatable for additional credit?  
   Yes No
   If YES: Maximum number of credit hours:
   If YES: Will this course allow multiple registrations during the same semester?  
   Yes No

j. * Course Description for Bulletin:
   The primary goal of this course is to prepare pharmacy students to accurately assess patient status, recognize potential problems and diagnoses based upon symptomatic complaints, and recommend the most appropriate action. Emphasis will be placed on clinical problem identification and therapeutic decision-making. Students will develop proficiency in systems screening, differential interviewing strategies, risk factors, and red flags. Pattern recognition and algorithmic approaches/diagnostic schematic approaches to clinical decision making will be presented and practiced using case presentations. Emphasis will also be placed on the reinforcement of medical history taking, physical exam skills, and laboratory interpretation.

k. Prerequisites, if any:
   Anatomy, physiology, and pathophysiology
   Basic Physical Exam Skills
   Basic patient interviewing and medical history skills
   Medical terminology
   Clinical Reasoning

l. Supplementary teaching component, if any:  
   Community-Based Experience  Service Learning  Both

3. * Will this course be taught off campus?  
   Yes No
   If YES, enter the off campus address:

4. Frequency of Course Offering.
   a. * Course will be offered (check all that apply):  
      Fall  Spring  Summer  Winter
   b. * Will the course be offered every year?  
      Yes No
      If No, explain:

5. * Are facilities and personnel necessary for the proposed new course available?  
   Yes No
   If No, explain:

6. * What enrollment (per section per semester) may reasonably be expected?  
   1-40

7. Anticipated Student Demand.
   a. * Will this course serve students primarily within the degree program?  
      Yes No
   b. * Will it be of interest to a significant number of students outside the degree program?  
      Yes No
      If YES, explain:

8. * Check the category most applicable to this course:
   Traditional – Offered in Corresponding Departments at Universities Elsewhere
   Relatively New – Now Being Widely Established
   Not Yet Found in Many (or Any) Other Universities

9. Course Relationship to Program(s).
   a. * Is this course part of a proposed new program?  
      Yes No
      If YES, name the proposed new program:
   b. * Will this course be a new requirement for ANY program?  
      Yes No
If YES, list affected programs:

New PharmD Curriculum

10. Information to be Placed on Syllabus.

a. * Is the course 400G or 500?  ☐ Yes  ☐ No
   If YES, the differentiation for undergraduate and graduate students must be included in the information required in 10.b. You must include additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students.

b. * The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading difference) above are attached.

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1. Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

2. The chair of the cross-listing department must sign off on the Signature Routing Log.

3. In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. Lab requires two hours per week for a semester for one credit hour. (from SR 5.2.1)

4. You must also submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.

5. In order to change a program, a program change form must also be submitted.

Rev 8/09
Course Coordinator:

Mandy Jones, PharmD, MPAS, BCPS  
Clinical Assistant Professor  
College of Pharmacy BPC 271  
Office phone: 323-2960  
Email: sjone3@email.uky.edu  
Office hours: By appointment

Course Instructors: Mandy Jones and TBD

Course Rationale:
Pharmacists require extensive knowledge, critical thinking skills, the ability to work with and understand other healthcare providers, and an appreciation for the basic principles of differential diagnosis to provide pharmacotherapy in various pharmacy practice settings. Differential diagnosis is the thought process of distinguishing a particular disease or condition from others that present with similar signs and symptoms. Instruction in basic principles of differential diagnosis prepares non-physician healthcare providers with the fundamental abilities and critical inquiry skills to ensure they understand their patients and the underlying cause of a disorder or complaint before determining a pharmacotherapy plan to manage patient symptoms and medical conditions. The complex thought process needed to provide effective patient care is part of the daily demands of pharmacists.

In professional practice settings, pharmacists often must decide whether they should recommend a prescription and/or non-prescription medication or medical referral based on patient symptomatic complaints. Thus, pharmacists should understand principles of differential diagnosis in order to effectively assess patient problems prior to recommending pharmacotherapeutic interventions.

Course Description and Goal:
The primary goal of this course is to prepare pharmacy students to accurately assess patient status, identify potential problems and diagnoses based upon symptomatic complaints, and recommend the most appropriate course of action. Emphasis will be placed on clinical problem identification and therapeutic decision-making. Students will develop proficiency in systems screening, differential interviewing strategies, risk factors, and red-flag recognition. Pattern recognition and algorithmic approaches/diagnostic schematic approaches to clinical problem solving will be presented and practiced using case presentations. Emphasis will also be placed on the development of more advanced interviewing and observational skills through the reinforcement of medical history taking, physical exam skills, and laboratory interpretation.


This course will be posted to and managed via Canvas. For tech support, please contact helpdesk@uky.edu or UKCOP IT Office in Room BPC 198.

Course Objectives/Student Learning Outcomes:
Upon completion of this course, the student will:

1. Recognize clinical presentations and symptom patterns associated with organ system disorders and treatment implications thereof.
2. Through medical history taking and physical exam, assess patient status and identify potential diagnoses and/or drug therapy problems.
3. Based upon patients’ presenting complaints, determine whether self-care is indicated or whether medical referral is required.
4. Verbalize or write a logical and appropriate line of questioning for patient assessment to obtain a history and to establish a working diagnosis.
5. Conduct an effective interview with standardized patients resulting in the identification of their clinical problem(s).
6. Modify working differential list and treatment intervention(s) either in role-playing situations or case discussions based on recognition and incorporation of patient specific factors and cultural differences/beliefs.
7. Recognize and list signs and symptoms of emergency medical conditions and describe interventions including procedures for obtaining appropriate medical assistance.
8. Verbalize a concise patient presentation suitable for interprofessional communication and clinical hand-offs utilizing the SBAR method.
9. Identify and differentiate between the clinical patterns associated with the following organ systems:
   a. Disorders of the Head, Eyes, Ears, Nose, Throat
   b. Cardiovascular disorders
   c. Respiratory disorders
   d. Gastrointestinal disorders
   e. Endocrine disorders
   f. Musculoskeletal disorders
   g. Neurological disorders
   h. Genitourinary disorders
   i. Dermatologic disorders
10. For the above disorders, describe the appropriate type of intervention (i.e. self-care, prescription therapy, referral to other members of the healthcare community) and timing of intervention.

**Instructional Methods:**
Case presentations and discussions will be the instructional cornerstone of this course utilizing a modified problem-based pedagogical format and team-learning approaches. Students will be exposed to the basic principles of differential diagnosis through practice and demonstration of information-gathering skills, research into and assignment of patient-specific pharmacotherapy, and integration of knowledge across the curriculum using individualized, simulated patient cases. Clinical problem-solving strategies will be applied and practiced. Role-playing and standardized patient encounters will be used to further develop these clinical decision-making skills as well as to promote advanced communication skills. Lectures, interactive methods, presentations, group problem-solving, and discussion will all be used.

During class time, the instructor will present a “one-liner” patient chief complaint based upon required reading assignments. Students will work within their teams to identify up to 10 potential problems based on the chief complaint. From the list students generate, the instructor will select and post up to 10 of these conditions. For the remainder of class, student teams will then utilize diagnostic schemata and interviewing processes with the instructor in order to “rule-in” or “rule-out” potential problems until the correct diagnosis is reached. The Socratic Method will be used for these discussions. For example, students will question the instructor to gather information regarding symptoms, physical exam findings, diagnostic/laboratory results, patient specific factors, concurrent medical conditions, etc. thus gradually learning more about the patient and complaint. Questions will be answered progressively and the responses inform students’ subsequent queries. Once the correct diagnosis is reached, students will then determine the best pharmacotherapy based upon best available evidence and patient-specific factors, such as special populations, poor adherence, low income, drug intolerances, allergies, previous treatment failures, etc. that may preclude use of certain therapies.

**Why Case Studies?**
Case studies provide students with an opportunity to apply and integrate what is being learned throughout the professional curriculum with the practical knowledge and skills needed for pharmacy practice. Case studies tell a “real” story of a person, not a diagnosis. They raise thought-provoking issues of patient problems, diagnoses, and interventions. Cases encourage students to think like a clinician and promote clinical curiosity, and they enable students to develop sound clinical decision-making processes.

**Why Class Discussions?**
Discussions provide you with opportunities to acquire knowledge, insight, and skills through face-to-face exchange of your rationale, information and ideas. Through discussion you gain practice in thinking through problems and organizing concepts, formulating arguments and counterarguments, testing out your ideas in a “safe” setting, and responding thoughtfully and critically to diverse points of view. Discussions teach you to think on your feet, provide rationale for your opinions, and develop a confident and effective professional persona.
**Student Expectations:**
Given the instructional format of this course, *it is expected that students will be prepared for class discussion* to maximize learning and course performance. It will be imperative for students to complete required reading assignments prior to class, as lectures are minimally utilized in this course. Students should be prepared to demonstrate mastery of the content, specifically (1) major diseases of the organ system, (2) primary signs and symptoms of the major diseases, (3) red flags associated with these conditions, (4) conditions amenable to self-care versus those that warrant medical referral. It is anticipated that students will need to dedicate approximately **3-5 hours per week** for reading assignments and class preparation. Students will always have at least 1 week to prepare for the next class session.

Required reading or other preparatory assignments are designed to accomplish several goals:
1. To prepare you for the upcoming class,
2. To promote advanced critical thinking skills related to topics covered in class,
3. To increase your depth and breadth of knowledge in a particular area,
4. To review topics you have had in previous classes,
5. To cover materials for which class time does not allow.

*This is not “busy work.”* Readings, assignments, and learning activities have been carefully selected to promote excellence in your clinical decision-making skills and to develop your clinical judgment.

**Student Case Presentations:**
During the latter portion of the course, student teams will interact with a standardized patient presenting with a symptomatic complaint. Teams will utilize information gathering skills to determine the primary problem and subsequent course of action. Immediately following the encounter, teams will work together to document a clinical note utilizing the SOAP format. SOAP notes will be submitted to the instructor at the conclusion of the learning activity. Student teams will then prepare a 7-minute “morning report” (presentation) to the class describing their patient. Items to be included in the presentation include:
- Patient’s presenting complaint
- Relevant patient specific factors
- Working differential
- Primary problem/assessment (diagnosis)
- Recommended plan

Students should be prepared to discuss their thought process in terms of how the assessment was determined. Power-point or Prezi may be utilized, and a template will be provided. Student presentations will be given in class the week following the standardized patient encounter. Presentation schedule will be posted to Canvas.

**Course pre-requisites:**
Anatomy, physiology, and pathophysiology
Basic Physical Exam Skills
Basic patient interviewing and medical history skills
Medical terminology
Clinical Reasoning

**Course co-requisites:**
Pharmacology
Pharmacotherapy
Evidence-based medicine/Primary literature research and review
Introductory clinical experiences

**REQUIRED materials:**
3. Turning point clickers and Mobile computing device with internet capability
Recommended/Optional texts:

Course Credit and Logistics:
This 16-week, 2-credit course will meet for 110 minute class sessions once per week. Reading assignments and preparation expectations will be posted to the Canvas course shell no later than 1 week in advance of the respective topic discussion.

Course Schedule:

<table>
<thead>
<tr>
<th>WEEK</th>
<th>TOPIC</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to Differential Diagnosis/Clinical Problem-Solving &amp; Documentation (POMR and SOAP)</td>
</tr>
<tr>
<td>2</td>
<td>Evaluation of Common Skin Complaints</td>
</tr>
<tr>
<td>3</td>
<td>Symptoms Related to the Ears, Eyes, Nose, and Throat</td>
</tr>
<tr>
<td>4</td>
<td>Evaluation of Cough</td>
</tr>
<tr>
<td>5</td>
<td>EXAM 1</td>
</tr>
<tr>
<td>6</td>
<td>Evaluation of Heartburn and Abdominal Pain</td>
</tr>
<tr>
<td>7</td>
<td>Evaluation of Chest Pain</td>
</tr>
<tr>
<td>8</td>
<td>Evaluation of Nausea, Vomiting, Diarrhea, and Constipation</td>
</tr>
<tr>
<td>9</td>
<td>EXAM 2</td>
</tr>
<tr>
<td>10</td>
<td>Evaluation of Headache</td>
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<tr>
<td>11</td>
<td>Evaluation of Musculoskeletal Symptoms</td>
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<tr>
<td>12</td>
<td>Evaluation of Dysuria and Vaginal Discharge</td>
</tr>
<tr>
<td>13</td>
<td>EXAM 3</td>
</tr>
<tr>
<td>14</td>
<td>Standardized Patient Encounter</td>
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<tr>
<td>15</td>
<td>Student Presentations</td>
</tr>
<tr>
<td>16</td>
<td>Final OSCE</td>
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</tbody>
</table>

Communication Preferences:
Email is the preferred mode of communication with the course coordinator. Students are encouraged to email the coordinator with individual or course concerns. Students may expect an email response from the coordinator within 48-72 business hours, however email is not checked on a regular basis over weekends and holidays. If a response has not been received within this time-frame, please don’t hesitate to resend your email with a reminder that you have not received a response. Should students wish to meet with the coordinator, please schedule an appointment so that adequate time may be devoted to your need(s) and so that I can ensure there are no conflicts with clinical or other responsibilities.

Assessment:
Three written exams are scheduled. The exams will cover reading assignments, class discussions, and student presentations. Written exams are cumulative, as knowledge obtained from prior content is further integrated into clinical decision-making. Exams are a combination of multiple choice, short answer, and essay-style questions. The exams are designed to evaluate your clinical decision-making abilities while having mastery of the content.

Additional assessments include:
- Random Turning Point quizzes
- Preparatory or in-class assignments
- Standardized patient encounter with SOAP note (as described above)
- Student team presentation
- Final objective structured clinical exam (OSCE) with a standardized patient

The final exam for this course is a 3-5 station OSCE utilizing standardized patients and documentation of an encounter via SOAP note. The OSCE is cumulative, as emphasis is placed on clinical decision-making skills. Unlike the patient encounter as previously described, the final OSCE will not be done in student teams; rather each student will be assessed as an individual. OSCE stations will examine students’ ability to assess patient status, determine the primary problem, and recommend an appropriate course of action. Physical
examination may also be performed if such findings are pertinent to formulating a diagnosis. The OSCE assigned schedule will be posted to Canvas no later than 1 week in advance of the activity.

**Grading Scale:**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90.0-100.0%</td>
<td>A</td>
</tr>
<tr>
<td>80.0-89.9%</td>
<td>B</td>
</tr>
<tr>
<td>70.0-79.9%</td>
<td>C</td>
</tr>
<tr>
<td>&lt;70.0%</td>
<td>E</td>
</tr>
</tbody>
</table>

- Quizzes and Assignments – 5%
- Standardized patient encounter – 10%
- Student team presentation – 15%
- Written Exams – 30%
- Final OSCE – 40%

**A minimum average of 70% on written exams must be achieved to pass the course (i.e. when all three exam grades are averaged, a 70% must be obtained to pass the course).**

The instructor makes every effort to have exams, assignments, etc. graded within 10 days. Grades are posted within the course shell gradebook in Canvas.

**Submission of Assignments:**

The instructor will provide notice for all assignments via email and Canvas. Please be sure to check your email regularly. The time frame for completing assignments will be provided for each assignment. Most assignments will be posted on Canvas, therefore submissions would be through Canvas (unless otherwise instructed). **Do not email your assignments to the course coordinator unless instructed to do so.**

A one-day late penalty will be the deduction of one letter grade for each assignment. After this time-frame the grade will be a zero unless there is a reason provided in accordance with University policy for excused absences.

**Attendance Policy:**

Attendance at all course meetings for the full class period is expected. The instructor reserves the right to take attendance at any time during the class period. Students absent for class votes, announcements, or when materials are distributed lose all rights to input. No make-ups, proxy votes, or absentee ballots are allowed. If a student is absent when a learning assessment is given, he/she will receive a zero for that assessment. In the case of a University or College excused absence (see definitions and process below), the student may be given an oral or written discussion opportunity at the discretion of the course coordinator. In all cases, it is the student’s responsibility to inform the course coordinator **prior** to any excused absence so that arrangements may be made to make up the work missed.

The student is responsible for making every reasonable effort to attend assessments as scheduled. If, for valid reasons, the student is unable to take an assessment at the scheduled time, he/she must notify the instructor **in advance**. In the event of an emergency, if the student cannot contact the instructor, please get in touch with the Director of Student Services in the Academic Affairs Office to report the situation. If an excusable absence is documented, a make-up assessment will be scheduled at the earliest mutually convenient time. The make-up assessment may be administered prior to or after the regularly scheduled assessment. The make-up assessment method may be chosen at the discretion of the instructor. **If the student misses an assessment without advance notification, he/she will receive a grade of zero for that assessment.** Students arriving late to an assessment will not be accommodated with additional time and no student will be admitted to an assessment if any student has left the assessment room for any reason. Any student not admitted due to tardiness will receive a zero for that assessment.

All students are encouraged to ask questions concerning lecture material before, during, or after class. Questions that cannot be adequately addressed at these times can be discussed individually or in small groups at a mutually convenient time, or can be made via use of the discussion board in Bb. If any student is in need of additional help with course material, he/she is encouraged to arrange an
office appointment with the instructor. Students are encouraged to use email to contact faculty to schedule an appointment or for short
questions concerning course material. Students can expect an e-mail response within 48-72 hours.

Excused Absences:
This course follows the college policy and definitions of excused absences which are provided in the student handbook at:

Verification of Absences:
Students may be asked to verify their absences in order for them to be considered excused. Senate Rule 5.2.4.2 states that faculty have
the right to request “appropriate verification” when students claim an excused absence because of illness or death in the family. Notification of absences due to university-related trips is required prior to the absence.

Classroom Behavior Policies / Professionalism:
According to the academic ombudsman, “To describe someone as a ‘scholar’ is to acknowledge the many traits and abilities exhibited by
an individual are consistent with scholarship. Scholars (faculty and students alike) expect a certain degree of respect from other scholars
regardless of the similarity or divergence of viewpoint and irrespective of age or experience. Faculty have the right - and the responsibility
- to ensure that all academic discourse occurs in a context characterized by respect and civility.” Respect and civility is expected in the
classroom, through verbal communication, and written/electronic communication. Consistent with this policy, student behavior that
detracts from the educational environment will not be tolerated. Examples of inappropriate behaviors include engaging in disrespectful
debate, holding disruptive discussions with fellow classmates, reading newspapers or playing electronic games during class, surfing the
internet, Facebook, Twitter, etc. during class, receiving phone calls in the classroom, texting, or sleeping. Disruptive students will be
asked to leave the classroom and will receive a one point deduction in the final course grade for each infraction. All cell phones must be
silenced during class. Headphones, iPods, or other digital audio players, are not to be used during class or exams.

Academic Integrity:
Cheating and plagiarism will not be tolerated and will be prosecuted to the fullest extent of Honor Code and University regulations. All
examinations will be taken in accordance with the College of Pharmacy Honor Code, which can be found at:
http://pharmacy.mc.uky.edu/programs/pharmd/files/COP%20Student%20Handbook.pdf. Each student is directed to the Honor Code and
should familiarize themselves with it. Specific examples of cheating within this course include but are not limited to the following:
- Discussing standardized patient encounters and OSCEs with other students
- Taking a Turning Point quiz on behalf of another student
- Copying another’s work
- Turning in someone else’s work as your own
- Not contributing to your team’s work yet claiming credit for contributing

Accommodations for Disabilities (Physical, Mental and/or Learning)
Any student seeking accommodations from the University must notify the Director of Student Success and Career Development in the
College of Pharmacy of that disability, in writing, preferably before the beginning of the school year, but in no case later than the third
day of classes for the fall/spring semester. If a disability develops during the school year for which accommodations are requested, the
student must notify Academic and Student Affairs, in writing, as soon as he/she becomes aware of the disability. The student must also
notify the coordinator of each course he/she is enrolled in of his or her anticipated accommodation in the same time frame. The student
will be required to provide current documentation of the condition for which they require accommodation to the University Disability Resource Center:
http://www.uky.edu/StudentAffairs/DisabilityResourceCenter/ (257-2754) before any accommodations can be instituted.

The Disability Resource Center will base provision of services to accommodate disability upon a review of current medical or
psychological document and an assessment of the current needs and appropriate services. In addition to the student’s notification,
request for accommodation and documentation will be kept confidential, but will be disclosed in the provision of the accommodation.
Students having the same accommodation may be tested together. A student with documentation from previous semesters in the
curriculum is not required to have his/her case re-evaluated by the Disability Resource Center. However, he/she must notify the
coordinator of each course he/she is enrolled in of his or her accommodation in no case later than the third day of classes for the fall/spring
semester.

Religious Observances:
The course instructor will provide students the opportunity to make up work (typically, exams or assignments) in the event that religious
observances prevent the students from doing their work at its scheduled time, however students must notify the course coordinator no
later than 2 weeks in advance of the religious observance, so that alternative accommodations can be made. Requests not received by this timeframe will not be accommodated.

**On-line Course Evaluation Policy:**
Regular course and instructor evaluations are required by state, university and college regulations. These evaluations are essential for improving student learning by providing feedback to faculty about their classroom presentations. Based on your feedback, important decisions are made about courses and how they are taught. This process CANNOT work without your input. **Please complete** a course and instructor’s evaluation for each of your courses. Your individual responses are completely anonymous. However, the Office of Education Innovation can track who has or has not completed each evaluation and send reminder notices. Summary reports of aggregate data will be provided to the faculty after the semester is completed. If you do not complete an evaluation, you will receive an incomplete grade (“I”) for the semester because you have not completed all of the course requirements. When you complete the course evaluation, the incomplete grade will be changed to the grade earned in the course.

**Research on Student Learning:**
Faculty wish to learn about the effectiveness of their teaching, especially with a new course like Differential Diagnosis in Pharmacy. One way to understand teaching effectiveness is to provide pre- and post-tests of students to assess improved knowledge and problem-solving skills. Data from such tests are not for a grade but assist the faculty in understanding areas for improvement as we gain more experience with a new course. Should such research occur in this course, the course coordinator will obtain appropriate Institutional Review Board (IRB) approval if indicated and will provide notice to students prior to conducting research.
Background
The current Doctor of Pharmacy curricula at the University of Kentucky was implemented in 1996 and with few minor exceptions the degree program has essentially remained unchanged. As a component of the 2011-13 Collegiate Strategic Plan the faculty endorsed a broad scale curricular reform process. The decision to engage in a major revision of the curriculum was driven by both internal (lag time since major modifications) and external factors (role of technologic and learning/pedagogic advances). Beginning in July of 2011 the College constituted several committees and working groups to design a new curricular framework that would change both the content and delivery model associated with the current Doctor of Pharmacy degree program. These various working groups have involved faculty, students, staff, residents, and alumni. Additionally, the College’s external advisory board has received regular updates on curricular reform progress and, in turn, provided feedback and recommendations for additional changes or modifications. In May of 2014 the faculty and other parties participated in a Curricular Reform Retreat held at the Boone Center. The Content map of courses has undergone 11 different revisions (see Content 11.1 attachment). To date, Curricular Reform has involved 4 distinct phases. The goal for launch of the ‘new’ curriculum (with the first professional year) is projected for Fall 2016.

**Phase 1:** Establishment of new outcomes for the Doctor of Pharmacy Degree Program. These ‘new’ outcomes were adopted and modified from the 2014 Center for Advancement of Pharmaceutical Education (CAPE) Proposed PharmD curricular outcomes. Once these outcomes were adopted both a Content Map and Delivery model were designed. Phase 1 also involved a re-examination of existing pre-requisites with small modifications which were approved by the HCCC in 2014.

**Phase 2:** This phase involved the initial ‘build-up’ of new courses as defined by our content map. These build-ups were orchestrated by teams of faculty who proposed goals and objectives for each course as well as broad “teaching topics” that would be found within each course. These teams also made initial proposal for assessments within each course as well as projected credit hour allotments.

**Phase 3:** In this phase specific faculty members were assigned a ‘new’ course and after being provided with ‘build up’ documents from Phase 2 they were asked to formally assemble a course syllabus using a uniform template syllabus.
Phase 4: All proposed syllabi were then collected and mapped to intended outcomes as well as topical areas required by our accreditation agency (Accreditation Council of Pharmacy Education-ACPE). Courses were also each reviewed by the curriculum committee and referred to course directors for edits, modifications, and clarifications. Subsequently, all syllabi were approved/endorsed by the curriculum committee and forwarded to the faculty. At the May 2015 meeting of the College Faculty all syllabi were approved.

Phase 5: Submission to HCCC for approval of courses by professional year.

Phase 6: PY1 ramp-up, The Institute, Fall 2016 launch (see “on-going activities” below).

Curricular Highlights (see Content 11.1 attachment)

- The new curriculum spans 4 professional years with no changes having been made to the fourth professional year. The fourth professional year involves 42 weeks of advanced pharmacy practice experiences (APPEs).
- Content within the new curriculum will be delivered using a hybrid or blended-learning model involving recitation, mini-lectures, off-loaded content, inverted classrooms, workshops, projects, and cases. Personal accountability for learning will undergird our approach as will limited or no “re-teaching” of previously instructed course work.
- The first professional year is primarily composed of foundational course work.
- The new curriculum involves a more integrated rather than silo approach to instructing pharmacy practice. The existing curriculum teaches students medicinal chemistry, pharmacology, physiology, pathophysiology, and pharmacotherapy in a set of separate and distinct courses. Within the new curriculum all of these courses have been combined and modularized so that instruction centers around a core body system or disease state. Instruction is integrated rather than sequestered. The integrated modular instruction will occur in a series of courses dubbed as “Integrated Drugs and Disease (IDD).” IDD will begin in the first professional year and continue to the third professional year as topics increase in complexity.

An example of IDD sequence involving HIV would involve instruction regarding normal immune physiology followed by the pathogenesis of HIV infection. Students would then be introduced to the medicinal chemistry of antiretrovirals, followed by the pharmacology of these agents. Lastly, students would learn the pharmacotherapeutic strategies and treatment guidelines for use of these drugs in managing acutely infected patients.

- Students will take part in a two-part course series designed to provide a foundation in scholarly inquiry. Scholarship I will introduce the fundamentals of basic inquiry while Scholarship II will require students to engage in the development of some faculty-mentored research, business, or clinical practice plan.
- iCATS 1.0 will remain a component of the new curriculum as defined by the UKs Center for Interprofessional Education (CPE).
- New curricular elements will include basic instruction in the differential diagnosis of low acuity primary care issues commonly encountered in the pharmacy setting, course work in
clinical reasoning and thought processes, and a course series dedicated to the enhancement of ‘soft skills.’

- The total projected credit hours for the new curriculum is estimated to be: 152 hours. The existing curriculum embodies 156 credit hours.

**On-Going Activities**

- Beginning in 2013 the College launched a faculty development seminar series labeled “CALIBRATE,” designed to prepare faculty for teaching in the new curriculum. Topical areas covered within this on-going seminar series have varied and included both internal as well as nationally recognized external speakers.

- PaCE or the ‘Patient Care Experience’ is a six semester sequence of courses intended to span the first three professional years of the new curriculum which will engender both simulated patient care encounters (laboratory exercises) and experiential training. The PaCE sequence is currently being revised and will be presented to the curriculum committee and faculty before being forward to the HCCC. To date plans are for PaCE to follow a “see one, do one, teach one” model where teams of first, second, and third professional year students work in teams to complete patient care related activities. Senior students within these teams will be given more supervisory responsibilities, while more junior students will be responsible for carrying out prescription orders or other patient related activities.

- STEPS: a component of assessment related to the new curriculum will be the incorporation of milestone exams or “STEPS” at the conclusion of each professional year. These exams will allow students to gauge their progress and learning across a professional year and will afford the ability to identify potential areas of weakness that could be remediated before progression to the next professional year. The development plan for these assessments is on-going.

- iPAD Initiative: The faculty are exploring adoption of an iPAD computing requirement for all students matriculating into the new curriculum. The use of a standardized iPAD platform would allow the faculty to better standardize teaching, accomplish content distribution, and conduct assessments.

- ExamSoft: The faculty have endorsed a move to ExamSoft® as the standard assessment software which will be used within the new curriculum. The use of ExamSoft® will allow for the standardization of all assessments, development of question banks, more rapid dissemination of feedback and grades, and mapping of individual questions to both outcomes as well as topical areas required by our accreditation agency. ExamSoft will also allow the faculty to provide students more robust statistical data in terms of their performance in specific areas or topics associated with any given course within the new curriculum.

- “The Institute”: As an extension of the CALIBRATE series, The Institute will involve a more intensive ‘boot camp’ approach to faculty and course development. The Institute will be a hands-on, multi-day workshop designed as a more rigorous training experience for faculty who will be teaching in the first professional year in Fall 2016. As the curriculum fans out, second and then third professional year teaching faculty will be invited to participate within The Institute.
## Content 11.2

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