New Course Form

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

Open in full window to print or save

Attachments:

<table>
<thead>
<tr>
<th>ID</th>
<th>Attachment</th>
</tr>
</thead>
<tbody>
<tr>
<td>5265</td>
<td>PHR 966 INTEGRATED DRUGS AND DISEASES 5 - CRITICAL</td>
</tr>
</tbody>
</table>

(*denotes required fields)

1. General Information
   a. * Submitted by the College of: PHARMACY Submission Date: 9/9/2015
   b. * Department/Division: Pharmacy
   c. * Contact Person Name: Frank Romanelli
      * Responsible Faculty ID (if different from Contact): Jimmi Hatton-Kolpek
      Email: froma2@email.uky.edu
      Email: jhatt1@uky.edu
      Phone: 257-4778
      Phone: 323-2769
   d. * Requested Effective Date: ☐ Semester following approval ☐ Specific Term/Year Spring 2016
   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 966
   c. * Full Title: Integrated Drugs and Diseases 5: Critical Care
   d. Transcript Title (if full title is more than 40 characters): IDD 5: Critical Care
   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:
      | Lecture | Laboratory | Recitation | Discus
      | Indep. Study | Clinical | Colloquium | Practi
      | Research | Residency | Seminar | Studio
      | Other | If Other, Please explain: discussion/simulation exercises
   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:  4

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:
   This course will describe the physiology, pharmacology, medicinal chemistry, pathophysiology, and the
   associated with commonly encountered disease states requiring admission to an intensive care unit so
   work with a team of providers to design and manage drug-related care plans for patients with these dis

k. Prerequisites, if any:
   Successful completion of ALL required courses in the PharmD program sequence leading up to IDD 5: Crit
   HIPAA Certification; SCM access

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 prog?  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:
PharmD new 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) 10.a 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. Laborat least 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
Doctor of Pharmacy Degree Program

Spring 2019

Integrated Drugs and Disease 5: Critical Care
PHR 966
4 credit hours

Course Coordinators:
Jimmi Hatton Kolpek, RPh, PharmD
Professor, Pharmacy Practice and Science
BPC 357
Jhatt1@uky.edu

Course Instructors:
Jeremy Flynn, Pharm.D.
Aaron Cook, Pharm.D.
Brian Gardner, Pharm.D.
Alex Flannery, Pharm.D.
Melissa Nestor Bastin, Pharm.D.
Sara Brouse, Pharm.D.
Jessie Dunne, Pharm.D.
Tracy Macaulay, Pharm.D.
Komal Pandya, Pharm.D.
Sara Parli, Pharm.D.
Abby Bailey, Pharm.D.
Regan Baum, Pharm.D.
Barbara Magnuson, Pharm.D.

Course Contributors: Interdisciplinary Healthcare Team Members from UKHC COM, CON and College of Health Sciences

Course Description/Goal(s):
To describe the physiology, pharmacology, medicinal chemistry, pathophysiology, and therapeutics associated with commonly encountered disease states requiring admission to an intensive care unit so students can work with a team of providers to design and manage drug-related care plans for patients with these disease states.
**Student Learning Outcomes:**
After completing this course, the student will be able to:

1. Integrate knowledge from foundational sciences (physiology and pathophysiology) to describe the impact of pre-existing diseases and conditions on systems structure and function following acute illness requiring intensive care.
2. Integrate knowledge from foundational sciences (medicinal chemistry, pharmacokinetics, pharmacology and therapeutics) to address formulations, dosing, and administration and explain how specific drugs and drug classes work and evaluate their potential value/risks in the treatment of hospitalized patients requiring intensive care.
3. Apply foundational knowledge in pharmaceutical and clinical sciences to design, implement and evaluate care plans for patients requiring admission to intensive care units.

**Course Meeting Pattern and Location:**
Recitation: 3 meetings per week (2 hours each for total of 4 hours recitation, 2 hours discussion/simulation exercise)

**Course Support Policies:**
Office Hours: The course coordinators will establish weekly office hours throughout the semester. The weekday and time will be established at the beginning of the semester based on the schedule of classes. It is anticipated these hours will take place on a “Study Day” in the afternoon. Course Instructors contributing to the topic specialties will announce office hours at the beginning of the module for the time period of their topic specialty.

Emails: Students may expect a response within one working day (M-F) for emails related to class content questions, requests for meetings or absence excuses.

Grading Goals: Students may expect a general turn-around time for assignments and/or exams within 5 working days of submission.

Posting of Course Materials: Students may expect materials required for course participation to be posted within 48 hours of the scheduled topic discussion period.

Posting of Grades: Grades will be posted on the Learning Management System prior to returning assignments and exams.

Student Outside Preparation: To successfully participate in the course discussion periods, students should plan to review posted materials, read background information from prior courses as related to cases and prepare notes for the discussion. It is expected that these activities will require 6-8 hours of preparation throughout each week.
Prerequisites:
Successful completion of ALL required courses in the Doctor of Pharmacy degree program sequence leading up to IDD 5: Critical Care.
HIPAA certification
SCM access

Required Texts and Materials:
Critical Care Pharmacotherapy (In development-Erstad, B ed.)
Goodman and Gilman’s The Pharmacological Basis of Therapeutics
Dipiro’s Pharmacotherapy
TOP 300 Mobile App (to be determined)
Evidence-based Treatment Guidelines (available online)

Students enrolled in the course are expected to have mobile computing devices with ExamSoft and other software and applications that meet the College requirements, access to computing devices that allow off-campus access of course materials, and working audience response (ARS) clickers that allow for active participation during recitations.

Teaching/Learning Methods
Methods of instruction will vary but will include two regular course meetings (recitations) each week focused on the topics listed in the course schedule and a two hour applied teaching technique session using simulations, discussions, self-assessment reviews. Recitations typically will begin with a case presentation and then will utilize the Socratic method of asking probing questions to facilitate discussion and the development of critical thinking skills in students. In order to respond to the probing questions posed by the course faculty, students are expected to review assigned content and prepare for case discussion. Assigned content may include PPT slides, reading assignments, recorded lectures, etc. In addition, patient simulation lab, video instruction, mini-lectures and small group discussions will be used to achieve course goals. Patient presentations and writing assignments may be used to assist students in achieving course outcomes. Faculty may assign students ICU patients from UKHC for portions of this course.

Assessment
The final grade in this course will be determined using the following percentage scale:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formative Assessments</td>
<td>10 %</td>
</tr>
<tr>
<td>Exam 1</td>
<td>20 %</td>
</tr>
<tr>
<td>Exam 2</td>
<td>20 %</td>
</tr>
<tr>
<td>Exam 3</td>
<td>20 %</td>
</tr>
<tr>
<td>Final Exam / OSCE</td>
<td>30 %</td>
</tr>
</tbody>
</table>
Letter grades will be assigned based upon the following scale (note that course grades are assigned based upon the final raw grade for this course – students should NOT expect that final grades will be rounded and/or curved):

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90% - 100%</td>
</tr>
<tr>
<td>B</td>
<td>89.9% - 80%</td>
</tr>
<tr>
<td>C</td>
<td>79.9% to 70%</td>
</tr>
<tr>
<td>D</td>
<td>≤69.9%</td>
</tr>
</tbody>
</table>

Final course grades less than 69.9% will result in a letter grade of “E.”

Assessments/Examinations
Three block examinations and one cumulative final exam with a final OSCE will be administered during the semester. The examinations will be varied in length and format and may include multiple choice, essay, fill-in-the-blank, etc. Please note that students must achieve a score of 70% or higher on the final OSCE in order to successfully pass the course.

Exam Schedule/Location/Times
TBD

In-Class Formative Assessments
In order to assess student progress and comprehension in the course, consistent, structured in-class formative assessments will be given. Students should come to each class meeting prepared for a formative assessment covering material and content assigned for review. Formative assessments may include quizzes, brief written responses to a posed question or idea, or others at the discretion of the course instructors. The audience response system may be used for formative assessments (see course policies below). Formative assessments will cumulatively account for 10% of the final course grade.

General Course Policies
Attendance Policy:
Regular and timely class attendance is critical to success in this course. Students are expected to come to recitation sessions prepared to participate fully in the course discussions. Students with excused absences (US 5.2.4.2) will not be penalized for the missed coursework but may be required to complete missed activities. All absences must be directly reported to and approved by the course director. In the event of an unanticipated University closing, all classes will be cancelled and the coursework made up during the remaining time in the semester.

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. Appropriate notification of absences due to university-related trips is required prior to the absence.
Missed assessments of any kind without notification or in the light of an unexcused absence will be graded as zero. Oral or written examinations may be administered for examinations missed secondary to excused absences. In all cases, it is the responsibility of the student to procure any missed work. All decisions regarding excused and unexcused attendance of any kind shall be at the final discretion of the course director.

**Classroom Behavior/Professionalism**

According to the academic ombudsman, “To describe someone as a ‘scholar’ is to acknowledge the many traits and abilities exhibited by an individual which 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.”

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, receiving phone calls in the classroom, or sleeping. Disruptive students will be asked to leave the classroom; any students dismissed from the classroom more than once for disruption will drop one letter grade. This policy, along with the Healthcare Colleges Professional Student Behavior Code, is expected to be reviewed by students to assure familiarity with professional expectations.

**Code of Conduct**

1. Identification badges should be worn at all times while in the COP building and should be affixed above the waistline or worn around the neck.
2. Professional behavior as described above is expected at all times. Any student not demonstrating professional behavior may be dismissed from teaching sessions.
3. All cell phones must be placed in the “silent” position during class.
4. Students must arrive on time and be prepared for activities including completion of required reading and written material.

*Violations of the code of conduct may result in expulsion from class and multiple infractions may result in failure of the course.*

**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 the following address: [http://pharmacy.mc.uky.edu/programs/pharmd/files/COP%20Student%20Handbook.pdf](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. **It is the responsibility of students to insure that their own behavior is such that no doubt could possibly exist at any time regarding their honesty or integrity.** Students are expected to work and submit materials individually unless otherwise directed to work in a group.
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
“Faculty shall give students the opportunity to make up work (typically, exams or assignments) when students notify them that religious observances prevent the students from doing their work at its scheduled time. Faculty shall indicate in their syllabus how much advance notice they require from a student requesting an accommodation. Faculty may use their judgment as to whether the observance in question is important enough to warrant an accommodation, although the presumption should be in favor of a student's request. The Offices of Institutional Diversity, the Dean of Students, and the Ombud are available for consultation.” Thus faculty are to be flexible in allowing student observers to make up school work missed on the official or commonly recognized high holy days. Supervisors are urged to show the same sensitivity regarding employees.

On-line Course Evaluation Policy for Course Syllabi
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.

**ExamSoft®**
ExamSoft will be required on your mobile computing device. You will be expected to download assignment or exams, using the provided schedule BEFORE the day of the exam, quiz or assignment (Download). Uploaded assignments or exams must be checked by the instructor or TA BEFORE you leave the room (check out). If this process is not followed, you will receive a zero for the assignment or exam.

**Turning Point Audience Response (ARS) Device**
Students must bring their Turning Point audience response device to all course meetings. Failure to bring a working device will result in forfeiture of any associated credit for quizzes given during that class period. Students must register the serial number of their device into the Learning Management System in the course tool section. Devices must be registered prior to the deadline set by the course coordinators. The deadline will be communicated to students in class and posted on the course Learning Management System site in the announcements section. Failure to register a device may result in forfeiture of points associated with quizzes given in the ARS format. Students may only use their registered ARS device to participate in quizzes. Use of another student’s registered device without prior notification and consent of the instructor will be considered a violation of the honor code. If use of another device occurs and the instructor cannot determine the responsible student, all points for that quiz will be forfeited for the entire class. It is the student’s responsibility to ensure proper working order of the device at all times.

**Socratic Teaching**

The oldest, and still the most powerful, teaching tactic for fostering critical thinking is Socratic teaching. In Socratic teaching we focus on giving students questions, not answers. We model an inquiring, probing mind by continually probing into the subject with questions. Fortunately, the abilities we gain by focusing on the elements of reasoning in a disciplined and self-assessing way, and the logical relationships that result from such disciplined thought, prepare us for Socratic questioning.

Thankfully, there is a predictable set of relationships that hold for all subjects and disciplines. This is given in the general logic of reasoning, since every subject has been developed by those who had:

- shared goals and objectives (which defined the subject focus)
- shared questions and problems (whose solution they pursued)
- shared information and data (which they used as an empirical basis)
- shared modes of interpreting or judging that information
- shared specialized concepts and ideas (which they used to help them organize their data)
- shared key assumptions (that gave them a basis from which to collectively begin)
- a shared point of view (which enabled them to pursue common goals from a common framework)

Each of the elements represents a dimension into which one can delve in questioning a person. We can question goals and purposes. We can probe into the nature of the question, problem, or issue that is on the floor. We can inquire into whether or not we have relevant data and information. We can consider alternative interpretations of the data and information. We can analyze key concepts and ideas. We can question assumptions being made. We can ask students to trace out the implications and consequences of what they are saying. We can consider alternative points of view. All of these, and more, are the proper focus of the Socratic questioner.

As a tactic and approach, Socratic questioning is a highly disciplined process. The Socratic Questioner acts as the logical equivalent of the inner critical voice which the mind develops when it develops critical thinking abilities. The contributions from the members of the class are like so many thoughts in the mind. All of the thoughts must be dealt with and they must be dealt with carefully and fairly. By following up all answers with further questions, and by selecting questions which advance the discussion, the Socratic questioner forces the class to think in a disciplined, intellectually responsible manner, while yet continually aiding the students by posing facilitating questions.

A Socratic Questioner should:
   a) keep the discussion focused
   b) keep the discussion intellectually responsible
   c) stimulate the discussion with probing questions
   d) periodically summarize what has and what has not been dealt with and/or resolved
   e) draw as many students as possible into the discussion.
Syllabus is subject to change with sufficient notice.

Course Schedule

<table>
<thead>
<tr>
<th>Recitation</th>
<th>Topic</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Critically Ill Patient-Impact of acute physiologic insults on organ system function</td>
<td>To understand the altered physiologic response of each organ system following acute injury</td>
</tr>
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<tr>
<td>3</td>
<td>Drug Delivery Considerations in Critically Ill Patients</td>
<td>To understand the impact of organ system altered physiological response on approaches to drug delivery for medications administered via skin, subcutaneously or enterally</td>
</tr>
<tr>
<td>4</td>
<td>Drug Delivery Considerations in Critically Ill Patients</td>
<td>To understand the impact of organ system altered physiological response on approaches to drug delivery for medications administered via intravenous, intracerebral, intrathecal routes or through implanted devices</td>
</tr>
<tr>
<td>5</td>
<td>Pharmacokinetic Changes in Critical Illness</td>
<td>To understand the impact of organ system altered physiological response on ADME</td>
</tr>
<tr>
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</tr>
<tr>
<td>7</td>
<td>Pharmacokinetic Changes in Critical Illness</td>
<td>To understand the mechanisms by which treatment interventions (ventilators, CV support pumps, dialysis) affect pharmacokinetic endpoints and drug responses</td>
</tr>
<tr>
<td>8</td>
<td>Hemodynamic Monitoring</td>
<td>Review patient from IDD Cardiology and introduce intensive care event requiring hemodynamic monitoring</td>
</tr>
<tr>
<td>9</td>
<td>Cardiogenic Shock Case</td>
<td>Review impact of ICU physiologic changes on medication use in IDD cardiology case</td>
</tr>
<tr>
<td>10</td>
<td>Trauma -Hypovolemic Shock Case</td>
<td>To understand the impact of acute trauma (non-CNS) on hemodynamic stability and medication responses</td>
</tr>
<tr>
<td>11</td>
<td>Trauma –Hypovolemic Shock Case</td>
<td>To understand fluid resuscitation protocols and impact of trauma on medication management</td>
</tr>
<tr>
<td>Page</td>
<td>Topic</td>
<td>Summary</td>
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<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12</td>
<td>Neurotrauma-Brain Injury</td>
<td>To understand the physiological, chemical, pharmacological and therapeutic principals important for the treatment of acute traumatic brain injury</td>
</tr>
<tr>
<td>13</td>
<td>Neurotrauma-Spinal Cord Injury</td>
<td>To understand the physiological, chemical, pharmacological and therapeutic principals important for the treatment of acute spinal cord injury</td>
</tr>
<tr>
<td>14</td>
<td>Stroke</td>
<td>To understand the physiological, chemical, pharmacological and therapeutic principals important for the treatment of ischemic stroke</td>
</tr>
<tr>
<td>15</td>
<td>Stroke</td>
<td>To understand the physiological, chemical, pharmacological and therapeutic principals important for the treatment of hemorrhagic stroke</td>
</tr>
<tr>
<td>16</td>
<td>Stroke</td>
<td>To understand the physiological, chemical, pharmacological and therapeutic principals important for the treatment of subarachnoid hemorrhage</td>
</tr>
<tr>
<td>17</td>
<td>Sepsis and Septic Shock</td>
<td>To understand the physiological, chemical, pharmacological and therapeutic principals important for the treatment of sepsis</td>
</tr>
<tr>
<td>18</td>
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</tr>
<tr>
<td>19</td>
<td>Toxicologic Emergencies</td>
<td>To understand the factors associated with drug overdoses and their treatment</td>
</tr>
<tr>
<td>20</td>
<td>Toxicologic Emergencies</td>
<td>To understand the factors associated with bioterrorism, exposure and antidotes</td>
</tr>
<tr>
<td>21</td>
<td>Bleeding Emergencies</td>
<td>To understand the dysregulated physiological mechanisms and drugs that may lead to bleeding emergencies</td>
</tr>
<tr>
<td>22</td>
<td>Pediatric Emergencies and ICU Considerations</td>
<td>To introduce the unique pathophysiological factors, medication challenges and family considerations contributing to the care of the pediatric patient in emergent and ICU circumstances</td>
</tr>
<tr>
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<td>To introduce the unique pathophysiological factors, medication challenges and family considerations contributing to the care of the pediatric patient in emergent and ICU circumstances</td>
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<tr>
<td>24</td>
<td>Supportive Care (FASTHUG)</td>
<td>To understand the mechanisms by which the different drug classes are effective for supportive care of ICU patients and the evidence supporting their use</td>
</tr>
<tr>
<td>25</td>
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<td>To understand the mechanisms by which the different drug classes are effective for supportive care of ICU patients and the evidence supporting their use</td>
</tr>
<tr>
<td></td>
<td>Module Title</td>
<td>Description</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>26</td>
<td>Supportive Care (FASTHUG)</td>
<td>To understand the mechanisms by which the different drug classes are effective for supportive care of ICU patients and the evidence supporting their use.</td>
</tr>
<tr>
<td>27</td>
<td>Managing ICU Complications</td>
<td>To understand the pathophysiological factors that contribute to complications following surgery or ICU admission and the treatment options including published guidelines for specific ICU populations.</td>
</tr>
<tr>
<td>28</td>
<td>Adverse Drug Reactions in the ICU</td>
<td>To understand the mechanisms by which the different drug classes are implicated in adverse reactions in critically ill patients.</td>
</tr>
<tr>
<td>29</td>
<td>Metabolic Syndromes in the ICU</td>
<td>To understand the altered metabolic responses observed in critically ill patients and the impact of medications and nutritional support.</td>
</tr>
<tr>
<td>30</td>
<td>End of Life-Post Intensive Care Syndrome (PICS)</td>
<td>To understand patient and family support needed following with critical illness.</td>
</tr>
<tr>
<td>31</td>
<td>Critically Ill Patient Case-Simulation</td>
<td>To apply the physiologic and therapeutic considerations using an integrated interdisciplinary team approach for a critically ill adult or pediatric patient.</td>
</tr>
<tr>
<td>32</td>
<td>Critically Ill Patient Case-Simulation</td>
<td>To apply the physiologic and therapeutic considerations using an integrated interdisciplinary team approach for a critically ill adult or pediatric patient.</td>
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<td>34</td>
<td>Critically Ill Patient Case-Simulation</td>
<td>To apply the physiologic and therapeutic considerations using an integrated interdisciplinary team approach for a critically ill adult or pediatric patient.</td>
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<td>35</td>
<td>Review for OSCI and Final Exam</td>
<td>To understand the mechanisms by which the different drug classes are effective for treating cardiac arrhythmias and apply the knowledge of the actions of different antiarrhythmic agents to the development of effective patient therapies.</td>
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<td>36</td>
<td>Review for OSCI and Final Exam</td>
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<tr>
<td>37</td>
<td>Review for Final Exam and OSCE</td>
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CURRICULAR REFORM 2016

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 pharmaco-therapeutic 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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<th>FALL</th>
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<tr>
<td>PY1</td>
<td>Transitions in Pharmacy</td>
<td>IDD 1 (ID) 4 (PHR 926-001)</td>
<td>IDD 2 (Neuro) 4 (PHR 936-001)</td>
<td>IDD 3 (Cardio) 6 (PHR 946-001)</td>
<td>IDD 4 (Psychiatry) 4 (PHR 956-001)</td>
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<td>IDD 1 (GI/Nutr) 2 (PHR 927-001)</td>
<td>IDD 2 (Rheum) 2 (PHR 937-001)</td>
<td>IDD 3 (GU) 2 (PHR 947-001)</td>
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<td>Kinetics and Dynamics 4 (PHR 921-001)</td>
<td>IDD 2 (Endocrine) 4 (PHR 938-001)</td>
<td>IDD 3 (Pulm) 3 (PHR 948-001)</td>
<td>Differential DX in Primary Care 2 (PHR 954-001)</td>
<td>Operations &amp; Fin Mgmt 3 (PHR 964-001)</td>
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<td>Wellness &amp; Health Promotion I 3 (PHR 913-001)</td>
<td>Foundations in Pharm Science II 3 (PHR 922-001)</td>
<td>Policy, Outcomes &amp; Public Health 3 (PHR 933-001)</td>
<td>Leadership in Pharmacy 3 (PHR 945-001)</td>
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### PaCE Schedule
- **PaCE 1**: 19 weeks
- **PaCE 2**: 19 weeks
- **PaCE 3**: 19 weeks
- **PaCE 4**: 16 weeks
- **IPPE I**: 16 weeks
- **IPPE II**: 17 weeks

### Electives
- **ELECTIVE 1**: 19 weeks
- **ELECTIVE 2**: 16 weeks
- **ELECTIVE 3**: 17 weeks

### IPPE
- **IPPE I**: 19 weeks
- **IPPE II**: 18 weeks

### PaCAs
- **PaCCA I**: 19 weeks
- **PaCCA II**: 16 weeks
- **PaCCA III**: 17 weeks