New Course Form

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

Open in full window to print or save

Attachments:

ID  Attachment
Delete 5202 PHR 951 SCHOLARSHIP I - GARNEAU-TSODIKOVA AND FEOL

First 1 Last

Select saved project to retrieve...

(*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 Email: froma2@email.uky.edu Phone: 257-4778
   d. * Responsible Faculty ID (if different from Contact): Sylvie Garneau-Tsodikova Email: sylvie.tsodikova@uky.edu Phone: 218-1686
   e. * Requested Effective Date: Semester following approval OR Specific Term/Year Fall 2018
   f. Should this course be a UK Core Course? Yes No

2. Designation and Description of Proposed Course.

   a. * Will this course also be offered through Distance Learning? Yes No
   b. * Prefix and Number: PHR 951
   c. * Full Title: Scholarship I
   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
      - Lecture
      - Independent Study
      - Research
      - Laboratory
      - Recitation
      - Colloquium
      - Clinical
      - Colloquium
      - Residency
      - Seminar
      - Other
      - Group Assignments
   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

3. Designation and Description of Proposed Course.

   a. * Will this course also be offered through Distance Learning? Yes No
   b. * Prefix and Number: PHR 951
   c. * Full Title: Scholarship I
   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
      - Lecture
      - Independent Study
      - Research
      - Laboratory
      - Recitation
      - Colloquium
      - Clinical
      - Colloquium
      - Residency
      - Seminar
      - Other
      - Group Assignments
   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:  3

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 is the first of a series of two courses that will advance the students' understanding of... and the scholarly process by providing them a systematic approach to build problem-solving skills. The
covered in Scholarship I aims to achieve three major objectives towards the synthesis of a complete r...
(1) the definition of common elements of problem solving and scholarship, (2) understanding and use of
statistics, and (3) the creation of appropriate research design[s] and research-based questions. The c...
consist of instructional mini-lectures and student group active learning activities building on materi:
in Clinical Reasoning.

k. Prerequisites, if any:
   PHR 914 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 pgm?  ○ Yes  ○ No
      If YES, explain:

8. * Check the category most applicable to this course:
   ○ Traditional – Offered in Corresponding Department 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 study.

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

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.
[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. Labor at 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
Course Description/Goal(s):

This course is the first of a series of two courses that will advance students’ understanding of scholarship and the scholarly process by providing them a systematic approach to build problem-solving skills. The material covered in Scholarship I aims to achieve three major objectives towards the synthesis of a complete research plan: (1) the definition of common elements of problem solving and scholarship, (2) understanding and use of descriptive statistics, and (3) the creation of appropriate research design(s) and research-based questions. The course will consist of instructional mini-lectures and student group active learning activities building on materials learned in Clinical Reasoning.

Prerequisites:
Clinical Reasoning (Fall PY1)

Student Learning Outcomes:
After completing this course, the student will be able to:

1. Define the common elements to problem solving and scholarship as they relate to the development of a clinical question, and/or hypothesis/null hypothesis related to a scientific inquiry. (CAPE 1.1.2)
2. Understand elements of descriptive statistics as it relates to nominal, ordinal,
and interval data as well as basic epidemiology. (CAPE 1.1.2)

3. Create appropriate research design(s) and/or assessments to test assumptions, research-based questions and/or practice-based interventions. (CAPE 3.1.1)

4. Synthesize background information, potential interventions, and testing procedures to produce a clear, concise, and complete research plan. (CAPE 1.1.6)

**Course Meeting Pattern and Location:**
- **Recitation Day 1** 1-2 hours BPC 124(152)  
  Active learning presentation
- **Think Day** 2 hours (est) N/A  
  Group assignment, recorded mini-lecture
- **Recitation Day 2** 1 hour BPC 124(152)  
  Discussion, quiz (ExamSoft or Audience Response)

**Required Materials:**
- Audience Response System “clickers”.
- Mobile computing device that can be loaded with ExamSoft or other necessary applications.

**Summary Description of Course Assignments:**

Provide a short summary of the different components of your assignments. For example, a short description of exams, assignments, etc… Students should be able to determine what they will be required to do from this.

This course will present students with a hands-on learning experience that will provide an overview of scholarship, study design, hypothesis generation, and the designing of research studies. Through active learning experiences in class and through the completion of individual and group assignments, students will experience first-hand the development of these skills. The experience will culminate in the formation of Project Groups that will choose a mentor and define a project that will then be developed in Scholarship II the following semester.

In addition, faculty that are experts and function in a wide range of types of scientific inquiry will present the basics of how they formulate hypotheses, what types of data they generate, what forms of analysis they use, their methods of data presentation, and ways they draw conclusions will be presented. These project description sessions will be uniform in terms of what the faculty present and include examples of projects in each scientific discipline including benchtop discovery, translational studies, clinical trials, and outcomes studies. The students will then be asked to actively engage in various aspects of these presentations through in-class and Think Day assignments.
The structure of the course will be to deliver content through recorded mini-lectures and pre-class assignments. This preparation will occur on the previous Think Day, or at any time leading up to that session as the student desires. During recitation, faculty would present and/or lead students through an active learning session on the current topic. Think Day would then follow, during which the students should work on that week’s group or individual assignment. In addition, Think Day activities will also include the identification of a Project Group and mentor—this longitudinal activity will be guided by a timeline. The final Recitation hour of the week will consist of discussion and wrap-up of that week’s topic, along with an in-class quiz (via either ExamSoft or Audience Response System). Some of these quizzes will be open-source and some will be closed-source. This cyclic delivery model is depicted here:

Once students form groups they will select a project in one of the following categories: bench-top discovery, clinical trial design, or outcomes/policy study. Groups will consist of 3-4 students and identify a project from the list of available topics provided by College of Pharmacy faculty before the semester begins using the attached Project Form (Appendix A). Two example project forms are also included in Appendix B. By the end of Scholarship I, each Project Group will have identified a mentor, topic, and provide a deliverable of a general outline of the project to be completed during Scholarship II. For students enrolled in dual-degree programs, all assignments and materials will be required for completion EXCEPT the identification of a mentor, group, topic, and outline generation. The project associated with the dual degree will take the place of the projects initiated in Scholarship I and completed in Scholarship II.

The Final Exam will be a closed-source assessment of the knowledge gained by each student throughout the semester. Students will be tested as to their ability to understand hypothesis generation and testing, data analysis and presentation, and results interpretation.
**Assessment**
Grading Scale and associated components/calculations.

- 90-100% = A
- 80-89% = B
- 70-79% = C
- <70% = E

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-class exercises</td>
<td>30%</td>
</tr>
<tr>
<td>Think day assignments</td>
<td>20%</td>
</tr>
<tr>
<td>Quizzes during recitation E</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
</tbody>
</table>

*All exam/course related grades and assessment are final after 7 days of posting.*  
*Non-circulating Exams and assignments may be viewed outside the course coordinator’s office at any time for up to 1 year after the course ends.*  
*Circulation policies related to old examination and course material access*  
*Final grades will be rounded up to the nearest percentage point.*

**Exam Schedule/Location/Times**
BPC 124 (152)/Times to be determined

**Exam Policies:**
Students will sit as directed by the assigned seating charts provided by the Academic Affairs Office for each exam. Bathroom breaks will be allowed during the exams, but the instructor/proctor reserves the right to limit the number of students who concurrently leave the room on a case-by-case basis. All procedures of the College of Pharmacy Exam Interruption Guidelines will be enforced in case of exam interruption.

**ExamSoft Guidelines:**
ExamSoft software will be required on each student’s laptop computer. Students will be expected to download assignments, quizzes, or exams using the provided schedule, BEFORE the day of the exam, quiz, or assignment (Download). Uploaded assignments, quizzes, or exams must be checked by the instructor or TA before leaving the room (check out). If this process is not followed, students may receive a zero for the assignment or exam.

**Course Policies:**
**Submission of Assignments:**
The instructor will provide notice for all assignments via email. Please check your email account regularly. The time frame for completing work will be provided for each assignment. Most assignments will be posted on Blackboard and therefore your response will be submitted within Blackboard.

Assignments, in general, will be due at the beginning of Recitation following the Think Day. Each student will be permitted to miss two in-class assignments per semester due to
unexcused reasons. Excused absences will result in makeup due dates when appropriate.

**Attendance Policy:**
The policy with regard to absences related to illness will be interpreted as illnesses of a nature where there is an exacerbation of a chronic illness or a serious acute illness, both of which may result in multiple or sequential days of class absence. In this latter case, we will endeavor to provide makeup quizzes or other equivalent assessments.

There will be occasions when a single or several days of class may be missed, for a cold, migraine headache, sinus infection, etc., at a time when a graded assessment is being offered. Makeup quizzes will be offered in this situation—please contact Dr. Feola immediately if this occurs.

**Excused Absences:**
College Policy (student handbook) – please consult this reference for information concerning excused absences.

**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. Appropriate notification of absences due to university-related trips is required prior to the absence.

**Classroom Behavior Policies / Professionalism:**
“To describe someone as a ‘scholar’ is to acknowledge the many traits and abilities exhibited by an individual that 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, both oral and written, occurs in a context characterized by respect and civility.” Office of the Academic Ombudsman

Student behavior that detracts from the educational environment will not be tolerated. Examples of inappropriate behaviors include: engaging in disrespectful debate, holding disruptive conversations with fellow classmates, receiving phone calls during class, reading newspapers during class, playing electronic games during class, sleeping during class meetings, attacks of a personal nature, written or verbal statements or actions denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin, disability or other such factors.

All actions taken due to inappropriate behavior will be documented and forwarded to the student record in the College of Pharmacy Academic Affairs Office.

**Dress code:** In general, students should dress so that their most conservative classmate,
instructor, client or patient would not be offended. Students must be neat and clean whenever they are attending classes in the College or the Medical Center. This course will follow the dress guidelines listed in the Student Handbook.

All students must wear the approved identification badge, issued and validated by Medical Center Security at all times when they are in the College or the Medical Center. Name badges will be worn clipped on the pocket of shirts or jackets, or worn around the neck. Name badges shall not be worn at the waist level or in other inappropriate locations.

Hats are not permitted to be worn in the classroom at any time.

**Mobile Devices:** Telephone use for communication (calls, texts, etc.) that does not pertain to the activities in class is not permitted. All devices must be “silenced” during class, and communication only received in emergency situations. Use of mobile device features (internet access, use of “Apps”) is limited to that which is directly related to class. Texting, emailing, web surfing, etc. will not be permitted. During examinations, mobile devices are required to be turned off.

**Entering/Leaving Class During Lecture/Case Presentations:** Classes will begin on the hour. Please limit the disruption that occurs with entering or taking seats after class begins. If this issue becomes problematic, the instructors reserve the right to disallow students the right to enter until the next scheduled hour.

**Recourse:** The Course Coordinator, with input from faculty, reserves the right to assess point deductions due to repeated infractions of the above courtesy guidelines and of those in the Student Handbook. A 10 point deduction (from the student’s overall points total) will be assessed and the individual will be notified in writing, after which time the student will have 2 “business days” to schedule a meeting with Dr. Feola to discuss the issue. After this time elapses, the deduction will be permanent.

**Instructor Communication:**
Please contact the course director or individual instructor via email for all questions regarding the course or the course content. Emails should include the course number and the phrase “question concerning...” in the subject heading to ensure a timely response. All efforts will be made to respond to each question within 48 hours of receipt.

**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.

**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.

_Syllabus is subject to change with sufficient notice._

**Course Schedule**

<table>
<thead>
<tr>
<th>Week</th>
<th>Content</th>
<th>Recitation A</th>
<th>Think Day B</th>
<th>Recitation E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction, course logistics, expectations, project overviews</td>
<td>Intro presentation, overview of Schol I and II</td>
<td>Recorded mini-lecture</td>
<td>Longitudinal assignment discussion</td>
</tr>
<tr>
<td>2</td>
<td>Drug development process review</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture</td>
<td>Discussion, quiz</td>
</tr>
<tr>
<td>3</td>
<td>Project design: basic science</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture</td>
<td>Discussion, quiz</td>
</tr>
<tr>
<td>4</td>
<td>Project design: translational science</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture</td>
<td>Discussion, quiz</td>
</tr>
<tr>
<td>5</td>
<td>Project design: clinical trials</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture</td>
<td>Discussion, quiz</td>
</tr>
<tr>
<td>6</td>
<td>Project design: outcomes</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture</td>
<td>Discussion, quiz</td>
</tr>
<tr>
<td>7</td>
<td>Project design: retrospective review</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture</td>
<td>Discussion, quiz</td>
</tr>
<tr>
<td>8</td>
<td>Hypothesis generation</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture</td>
<td>Discussion, quiz; Project Group declaration due</td>
</tr>
<tr>
<td>9</td>
<td>Methods and endpoints</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture</td>
<td>Discussion, quiz</td>
</tr>
<tr>
<td>10</td>
<td>Study design</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture</td>
<td>Discussion, quiz</td>
</tr>
<tr>
<td>11</td>
<td>Types of data and analysis</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture</td>
<td>Discussion, quiz</td>
</tr>
<tr>
<td>12</td>
<td>Descriptive statistics</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture</td>
<td>Discussion, quiz; Mentor/project choice due</td>
</tr>
<tr>
<td>13</td>
<td>Basic epidemiology</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture, meet with mentors</td>
<td>Discussion, quiz</td>
</tr>
<tr>
<td>14</td>
<td>Comparative effectiveness</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture, meet with mentors</td>
<td>Discussion, quiz</td>
</tr>
<tr>
<td>15</td>
<td>Literature analysis</td>
<td>Active learning presentation</td>
<td>Group assignment, recorded mini-lecture, meet with mentors</td>
<td>Discussion, quiz; Project outline due</td>
</tr>
</tbody>
</table>
Appendix A – Template for description of project

Faculty name:

Discipline:

PROJECT #1:

Project category (select from Basic sciences “bench-top discovery”, Clinical trial design, Outcomes/policy):

Deliverable (select from R21 grant application, IRB protocol, research paper):

Research/project description (Note: This should be brief, no more than 10 lines):

Number of teams that can work on this project:

PROJECT #2:

Project category (select from Basic sciences “bench-top discovery”, Clinical trial design, Outcomes/policy):

Deliverable (select from R21 grant application, IRB protocol, research paper):

Research/project description (Note: This should be brief, no more than 10 lines):

Number of teams that can work on this project:
Appendix B – Example of a Filled template for description of a “basic sciences” project

Faculty name: Sylvie Garneau-Tsodikova, Ph.D.

Discipline: Medicinal Chemistry (Drug Discovery)

PROJECT #1 and #2:

Project category (select from Basic sciences “bench-top discovery”, Clinical trial design, Outcomes/policy): Basic sciences

Deliverable (select from R21 grant application, IRB protocol, research paper): R21 grant

Research/project description (Note: This should be brief, no more than 10 lines): This project aims to combat the ever-growing problem of antibiotic resistance. It focuses on the resistance enzyme involved in conferring resistance to the broad-spectrum antibiotics, aminoglycosides, in *Mycobacterium tuberculosis*. The Garneau-Tsodikova laboratory has solved the crystal structure of this enzyme and identified a series of inhibitors of this resistance enzyme. During this project, the team will have for goal to optimize the drug properties of one of the lead scaffolds identified. The methods to be utilized include: computational modeling, medicinal chemistry, drug metabolism experiments, x-ray crystallography, as well as biochemical and antibacterial testing. By the end of the project, the team should have proposed a variety of novel lead compounds taking into consideration all of the various aspect of optimizing a drug scaffold.

Number of teams that can work on this project: 2 (each with a unique lead scaffold)
Appendix C – Example of a Filled template for description of a “clinical trial design” project

Faculty name: David Feola, Pharm.D., Ph.D.

Discipline: Infectious Diseases/Immunology

PROJECT #1 and #2:

Project category (select from Basic sciences “bench-top discovery”, Clinical trial design, Outcomes/policy): Clinical trial design

Deliverable (select from R21 grant application, IRB protocol, research paper): IRB protocol

Research/project description (Note: This should be brief, no more than 10 lines): Patients with cystic fibrosis eventually succumb to decreased pulmonary function due to repeated bacterial infections that cause fibrotic lung changes and functional decline. Research and clinical experience has shown that the antimicrobial drug azithromycin alters the immune response and blunts inflammation, slowing the progression of pulmonary damage. Our lab group has shown that azithromycin alters macrophage gene expression, using cell culture and animal studies, to resemble more of an anti-inflammatory cell phenotype. We extended those studies to the clinic and showed a correlation between macrophage gene expression and clinical characteristics, including azithromycin therapy, in patients with cystic fibrosis. A problem we encountered is that there were only a few patients who were not receiving azithromycin. The purpose of this project is to design a clinical trial in which each research subject is used as their own control by temporarily stopping azithromycin therapy. Gene and protein expression from pulmonary macrophages will be compared on and off the drug.

Number of teams that can work on this project: 1
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 UK’s 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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