RECEIVED
JUL 9 2014
OFFICE OF THE SENATE COUNCIL

1. General Information

1a. Submitted by the College of: MEDICINE

Date Submitted: 3/26/2014

1b. Department/Division: Pharmacology

1c. Contact Person

Name: Kevin Pearson

Email: kevin.pearson@uky.edu

Phone: 859-218-1371

Responsible Faculty ID (if different from Contact)

Name:

Email:

Phone:

1d. Requested Effective Date: Specific Term/Year [1] Fall 2015

1e. Should this course be a UK Core Course? No

2. Designation and Description of Proposed Course

2a. Will this course also be offered through Distance Learning?: No

2b. Prefix and Number: NS 623

2c. Full Title: PROFESSIONAL DEVELOPMENT FOR SCIENTISTS IN TRAINING

2d. Transcript Title: PROFESSIONAL DEVELOPMENT FOR SCIENTISTS

2e. Cross-listing: PHA 623

2f. Meeting Patterns

LECTURE: 2

DISCUSSION: 1

2g. Grading System: Letter (A, B, C, etc.)

2h. Number of credit hours: 3

2i. Is this course repeatable for additional credit? No

If Yes: Maximum number of credit hours:

If Yes: Will this course allow multiple registrations during the same semester?

2j. Course Description for Bulletin: The purpose of this course is to introduce graduate students to useful topics in their quest to attain and retain a tenure track researcher position (or equivalent) at some point in their scientific future. These subjects are not always taught by mentors or through a traditional curriculum, but they are of utmost importance in a successful career. A breadth of issues will be presented that many principal investigators would say they wished they learned in graduate school and should give students the resources to become competitive scientific professionals.

2k. Prerequisites, if any:

2l. Supplementary Teaching Component:

3. Will this course taught off campus? No

If YES, enter the off campus address:

4. Frequency of Course Offering: Fall,

Will the course be offered every year?: Yes

If No, explain:

5. Are facilities and personnel necessary for the proposed new course available?: Yes

If No, explain:

6. What enrollment (per section per semester) may reasonably be expected?: 5-10 graduate students

7. Anticipated Student Demand

Will this course serve students primarily within the degree program?: No

Will it be of interest to a significant number of students outside the degree pgm?: Yes

If Yes, explain: It will be beneficial for many PhD students of various disciplines and even clinical fellows. The goal is to attract only those students that want to direct their own research program in the future.

8. Check the category most applicable to this course: Not Yet Found in Many (or Any) Other Universities ,

If No, explain:

9. Course Relationship to Program(s).

a. Is this course part of a proposed new program?: No

If YES, name the proposed new program:

b. Will this course be a new requirement for ANY program?: No

If YES, list affected programs:

10. Information to be Placed on Syllabus.

a. Is the course 400G or 500?: No

b. The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from **10.a** above) are attached: Yes

Distance Learning Form

Instructor Name:

Instructor Email:

Internet/Web-based: No

Interactive Video: No

Hybrid: No

1.How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations?

2.How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc.

3.How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc.

4.Will offering this course via DL result in at least 25% or at least 50% (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above?

If yes, which percentage, and which program(s)?

5.How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?

6.How do course requirements ensure that students make appropriate use of learning resources?

7.Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.

8.How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Information Technology Customer Service Center (http://www.uky.edu/UKIT/)?

9.Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? NO

If no, explain how student enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.

10.Does the syllabus contain all the required components? NO

11.I, the instructor of record, have read and understood all of the university-level statements regarding DL.

Instructor Name:

SIGNATURE|MRWH224|Melissa R Wilkeson|NS 623 NEW College Review|20140502

SIGNATURE|ZNNIKO0|Roshan N Nikou|NS 623 NEW Graduate Council Review|20140709

Courses | Request Tracking

New Course Form

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

Open in full window to print or save

Generate R

Attachments:

Browse... Upload File

	ID	Attachment
Delete	3299	PROFESSIONAL DEVELOPMENT FOR SCIENTISTS IN TRAININ

First 1 Last

Select saved project to retrieve... Get New

(*denotes required fields)

1. General Information

a. * Submitted by the College of: MEDICINE Submission Date: 3/26/2014

b. * Department/Division: Pharmacology

c.

* Contact Person Name: Kevin Pearson Email: kevin.pearson@uky.edu Phone: 859-218-1371

* Responsible Faculty ID (if different from Contact) Email: Phone:

d. * Requested Effective Date: ○ Semester following approval OR ◉ Specific Term/Year [1] Fall 2015

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 [4] ◉ No

b. * Prefix and Number: NS 623

c. * Full Title: PROFESSIONAL DEVELOPMENT FOR SCIENTISTS IN TRAINING

d. Transcript Title (if full title is more than 40 characters): PROFESSIONAL DEVELOPMENT FOR SCIENTI

e. To be Cross-Listed [2] with (Prefix and Number): PHA 623

f. * Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours[3] for each meeting pattern type.

2	Lecture	Laboratory[1]	Recitation	1	Discussion
	Indep. Study	Clinical	Colloquium		Practicum
	Research	Residency	Seminar		Studio
	Other	If Other, Please explain:			

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:

The purpose of this course is to introduce graduate students to useful topics in their quest to attain and retain a tenure track researcher position (or equivalent) at some point in their scientific future. These subjects are not always taught by mentors or through a traditional curriculum, but they are of utmost importance in a successful career. A breadth of issues will be presented that many principal investigators would say they wished they learned in graduate school and should give students the resources to become competitive scientific professionals.

k. Prerequisites, if any:

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?** 5-10 graduate students

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:

It will be beneficial for many PhD students of various disciplines and even clinical fellows. The goal is to attract only those students that want to direct their own research program in the future.

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[2] for ANY program? ○ Yes ● No

If YES[2], list affected programs::

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: (i) identi additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR

b. ☑ * The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if appl **10.a** above) are attached.

[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.

NS 623
PHA 623
PROFESSIONAL DEVELOPMENT FOR SCIENTISTS IN TRAINING
SPRING 2016
3 CREDITS

COURSE DIRECTOR

Kevin Pearson, PhD
Wethington Room 591
kevin.pearson@uky.edu
859-218-1371
Office hours are Mon and Wed 2-3:30pm and by appointment

COURSE DESCRIPTION

The purpose of this course is to introduce graduate students to useful topics in their quest to attain and retain a tenure track researcher position (or equivalent) at some point in their scientific future. These subjects are not always taught by mentors or through a traditional curriculum, but they are of utmost importance in a successful career. A breadth of issues will be presented that many principal investigators would say they wished they learned in graduate school and should give students the resources to become competitive scientific professionals.

LEARNING OBJECTIVES (ACHIEVABLE BY THE END OF THE SEMESTER)

- Will be able to identify the qualities of a successful professional scientist.
- Will be able to plan research and career goals and explain the necessary steps to accomplish said goals.
- Will be able to predict the necessary steps to successfully obtain a research focused faculty position.
- Will be able to identify the necessary steps in order to apply for funding for a research program.
- Will be able to explain the appropriate steps to start up a laboratory and hire personnel within a small business (i.e. the lab).
- Will be able to indicate opportunities for open communication and collaboration with your peers and colleagues.

CLASS MEETINGS

This class will meet on Tuesdays from 3:00-5:30pm. The meeting place will be determined following course approval.

ATTENDANCE POLICY

Regular class attendance is critical to success in this course. Tardiness is an inconvenience to classmates and instructors. Classroom discussion is an essential component of the grade for this course. Therefore, students are expected to arrive on time and participate in all course related activity. Two unexcused absences will be allowed during the semester before a letter grade reduction may be employed.

REQUIRED READING

Making the Right Moves: A Practical Guide to Scientific Management for Postdocs and New Faculty from the Burroughs Wellcome Fund and Howard Hughes Medical Institute, 2006. This is a free textbook that is available online at the Howard Hughes Medical Institute website. www.hhmi.org. It should be read and kept nearby for the next decade or more.

Homework reading assignments.

"Strong interference" by Platt in *Science* 1964 and "Scientific method: statistical errors" by Nuzzo *Nature* 2014 (these articles will be provided by Dr. Pearson) and *Apprentice to Genius—The Making of a Scientific Dynasty* by Robert Kanigel (available online for < $25).

DESCRIPTION OF COURSE ACTIVITIES, ASSIGNMENTS, AND GRADING POLICIES
GRADING:
There are four components to the final grade. These are:

Homework Assignments: 50% of the total grade.
Written homework will be assigned weekly. Homework is due by the following week's class unless specifically noted below. See policy below regarding "Submission of Assignments".

Oral Presentation: 20% of the total grade.
Each student will deliver a PowerPoint presentation (20-30 minutes) on his/her own lab project or a journal article. Students will receive scores based on visual clarity, ability to engage (hook) the audience, and message clarity. Fellow classmates and the course instructor will critique the presentation to improve the student's development as a professional presenter.

Class Participation: 20% of the total grade.
Students will be expected to contribute to the intellectual atmosphere of the class by participating in classroom discussions. There will be many roundtable and small group breakouts that will provide ample opportunity for classroom interactions. Providing constructive criticism for other students' presentations will also be incorporated in this grading requirement.

Final Examination: 10% of the total grade.
A take home final exam will be provided and will make up a small percentage of the final grade for this course. The questions will be given on the first day of class and can be answered any time throughout the semester prior to the University's scheduled time for the final exam for this course.

The following grading scale will be used to determine the final class grade.

A = 90% or better
B = 80-89.9%
C = 70-79.9%
E (Fail) = Below 70%
I = Incomplete

MID-TERM GRADING
Mid-term grades will be posted in myUK by the deadline established in the Academic Calendar (http://www.uky.edu/Registrar/AcademicCalendar.htm)

SUBMISSION OF ASSIGNMENTS
The assignments must be turned in at the beginning of the following week's class or emailed to kevin.pearson@uky.edu prior to the following class period. If the email option is utilized, a confirmation email from Dr. Pearson is required to document his receipt of the assignment. Send all correspondence for class from your official UKY email address only or it will not count. The first assignment from a non UKY email account will receive a 20% reduction and future assignments will receive a zero. Late assignments will be assigned a zero as deadlines become more critical the further you get in your career.

EXCUSED ABSENCES POLICY
Excused absences and make-up opportunities for this course will conform to the course policies established by the Office of Academic Ombudsman Services as found at www.uky.edu/Ombud/policies.php

Excused Absences.
Students need to notify the professor of absences prior to class when possible. S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit "reasonable cause for nonattendance" by the professor. Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, currently Mr. Jake Karnes (859-257-2754). Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused or unexcused) per university policy.

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.

ACADEMIC INTEGRITY
Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed. Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: http://www.uky.edu/Ombud. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited. Part II of Student Rights and Responsibilities (available online http://www.uky.edu/StudentAffairs/Code/part2.html) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission. When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be. Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content, and phraseology intact are plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1). Please note: Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

ACCOMMODATIONS DUE TO DISABILITY
If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, current email

address: jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

CLASSROOM BEHAVIOR

Behavior that detracts from the educational environment will not be tolerated. Professional behavior is expected. This is defined as: treating the instructors and your fellow students in a respectful and courteous manner. Instructors and students alike are entitled to professional respect from one another regardless of the similarity or divergence of viewpoint and irrespective of age or experience. Disruptive students will be asked to leave the classroom and may receive a penalty to their final grade in the course.

LECTURE SCHEDULE

Date	Topic
1/13/2016	What To Expect: Introduction to the course/course expectations/how I became a scientist/the importance of mentorship (finding the right ones throughout your career)/getting the most out of your students/mentor (open communication) ➢ Homework: Write a paragraph that describes your long-term career objectives as they stand today.
1/20/2016	Directed Research: Hypothesis driven research/experimental design/data analysis *Readings: Strong interference by Platt in Science 1964 and Scientific method: statistical errors by Nuzzo Nature 2014* ➢ Homework: Write a short introduction/background paragraph that leads to a hypothesis about your current lab work.
1/27/2016	Organization and Data Management: Maintaining an effective laboratory notebook/data analysis examples and practice ➢ Homework 1: Bring in a COPY of a representative page from your notebook to this class on 1/27. ➢ Homework 2: Finish data analysis on problem set.
2/3/2016	Professional Presentation Skills: Deliver complex scientific information while hooking your audience/preparing a manuscript/introduction to EndNote ➢ Homework: Choose a title from a paper listed in PubMed that really caught your attention and succinctly describe why/how the title stood out to you. Peruse the paper and describe whether the data are worthy of (support) the catchy title.
2/10/2016	Regulatory Agencies: introduction to the Institutional Animal Care and Use Committee/Institutional Review Board/Institutional Biosafety Committee/Radiation Safety/Food and Drug Administration ➢ Homework: Talk to your mentor about the status of your lab's approval for these and other regulatory elements. Write a short summary of this discussion.
2/17/2016	Getting a Job: Applying for jobs/marketing yourself/pros and cons of academia, government, and industry positions *Reading: Apprentice to Genius—The Making of a Scientific Dynasty* ➢ Homework: Up-to-date curriculum vitae and cover letter drafts.
2/24/2016	Negotiations: multiple offers/start-up packages/hiring/filling your laboratory ➢ Homework: Talk to a PI about their experiences with 'bad' hires. Write about the qualities that are of utmost importance in a laboratory employee.

3/2/2016 Protecting Your Assets: Budgeting/record keeping/audits

- Homework: Start keeping your own budget at home. Get your finances under control because this is excellent practice for running a research enterprise.

3/9/2016 Pre-Award: How to find and apply for grants/types of grants/contracts

- Homework: Find an NIH RFA or FOA that is of interest to you. Then write a cover letter that includes the NIH Institute and Scientific Review Group that you would target for the grant proposal that was (hypothetically) written from your earlier hypothesis.

3/16/2016 Spring break

- Homework: Be safe.

3/23/2016 The Waiting Game: What happens after grant submission/peer review/council review/funding decisions

- Homework: Provide the current paylines for an R01 and R21 at the institute where your (hypothetical) proposal was assigned.

3/30/2016 Post-award: effort/progress reports/carry forward/no cost extensions/bridge funding

- Homework: Make up a distribution of effort for yourself as a student.

4/6/2016 Networking: The importance of asking questions/how collaborative science will jump start your career

- Homework: Find another student in class and design a collaborative experiment or project. Write a short paragraph as a team describing the collaborative project. Write a second paragraph individually that describes how your own skills/techniques/expertise will benefit the collaboration.

4/13/2016 Student presentations: Your own lab project or a journal article

- Homework: Critique (both positive and negative) each student's presentation style, etc.

4/20/2016 Critique of student presentations: how they can be improved for the future/sample questions

- Homework: Write a question that you wish you would have asked during class this semester but did not.

4/27/2016 Setting goals: the 5, 10, and 20 year plans/what you can do before you graduate

- Take home final exam question 1: Provide your short-, medium-, and long-range goals for your own career. Describe specific steps that will allow you to obtain your goals.
- Take home final exam question 2: What do you wish you learned during this semester, but we did not cover? What topics did we cover that you think we could improve upon?