University Senate Agenda

All meetings are from 3:00 - 5:00 pm in the Auditorium of William T. Young Library unless otherwise noted.

Monday, March 21, 2011

- 1. Minutes and Announcements
- 2. Officer Reports
 - a. Chair
 - b. Vice Chair
 - c. Faculty Trustee Update
 - d. Presidential Search Committee Faculty Representative
 - e. QEP Presentation Deanna Sellnow and Diane Snow
- 3. Committee Reports
 - a. Senate's Academic Programs Committee Dan Wermeling, Chair
 - Proposed New PhD in Integrated Plant and Soil Sciences pg. 2-38
 - Proposed New Graduate Certificate Pharmaceutical Science pg. 39-46
 - b. Senate's Admissions and Academic Standards Committee Alison Davis, Chair
 - Proposed New Grade Type, College of Pharmacy pg. 47-52
 - c. Senate's Academic Organization and Structure Committee Dwight Denison, Chair
 - Proposed Name Change for Department of Family Studies pg. 53-56
- 4. August 2010 KCTCS Candidate for Credentials
- 5. Discussion on Proposed *Governing Regulation X.B.2.d.vii* ("Entrepreneurial Leaves of Absence") (for endorsement) pg. 57-59
- 6. UAB Report Joe Fink, UAB Hearing Officer
- 7. UK Faculty Athletics Representative to the SEC and NCAA Report Joe Fink
- 8. State of Libraries Report Libraries Dean Terry Birdwhistell
- 9. Presentation on Statewide Learning Outcomes Associate Provost for Undergraduate Education Mike Mullen

Next Meeting: April 11, 2011

February 14, 2011

Minutes- Senate Academic Programs Committee

February 9, 2011 3-4 pm, Room 414 CRMS

Members in Attendance

Daniel Wermeling, Andrew Hippisley, Marilyn Duncan, Karen Badger, Esther Dupont-Versteegden, Michael Arrington, Mary Arthur

Members Absent

Greg Wasilkowski

Agenda

- New Graduate Certificate in Pharmaceutical Science
- New Ph.D. in Integrated Plant and Soil Science

The New Graduate Certificate in Pharmaceutical Science was presented by the Ester Dupont-Versteegden to members of the Senate Academic Programs Committee. The program offers College of Pharmacy students a pathway to study basic pharmaceutical sciences in the professional program. The goal is to encourage pharmacy students to consider a Ph.D. in pharmaceutical sciences upon graduation of the pharmacy school. The Gateway complements 2 other Gateway certificate programs offered by the College of Pharmacy. The educational requirements were not initially clear to the committee. A request was made for clarification on credits – the sponsors made a satisfactory response. The program was considered highly desirable by the committee members and well aligned with student and faculty initiatives.

A motion was made to approve the Gateway Certificate in Pharmaceutical Science. The motion was seconded and all members present voted in the affirmative – the motion carried.

The new Ph.D. program in Integrated Plant and Soil Science was presented by Greg Wasilkowski (written assessment) and Dan Wermeling (presentation) to members of the Senate Academic Programs Committee. The notion of the proposal is to integrate 5 different graduate programs under a single heading. The proposal states a number of advantages relates to critical mass of instructors, single entry point for applications and students, and single DGS, and ability to improve space management. Committee members commented that this proposal was the best submission In terms of thoughtfulness and breadth of consideration and could be a model for other submissions. The only question raised was whether the 5 current graduate programs would be eliminated. The sponsor stated that they would be suspended or withdrawn when all students in the various programs have completed or are no longer in the program.

A motion was made to approve the Integrated Plant and Soil Science Ph.D. Program. The motion was seconded and all members present voted in the affirmative – the motion carried.

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Robert L. Houtz, Professor

Chair, Department of Horticulture
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March 15, 2010

Dr. Jeannine Blackwell, Dean Graduate School 102 Gillis Building University of Kentucky Campus 0033

Dear Dean Blackwell:

We would like to propose a new umbrella graduate degree program (Integrated Graduate Program in Plant and Soil Sciences, IPSS) which will provide an integrative and creative approach to graduate education in the plant and soil sciences. Graduate faculty in the departments of Forestry, Horticulture, and Plant and Soil Sciences support this proposal. The objectives of this proposal are to build strength in the currently existing graduate M.S. and PhD programs in Crop Science, Plant Physiology, Molecular Biology and Biochemistry, Horticulture, and Soil Science by combining these programs into an overall Integrated Graduate Program. The integrated program offers many advantages in student training, recruitment, program student numbers, and efficiency in administration. The program provides unique opportunities to cultivate and exploit the benefits that can be derived from an interdisciplinary approach to graduate education and research, and significantly contributes to the culture and development of graduate students as future scholars. There are two new courses associated with the IPSS program, IPS 610, and IPS 625.

The IPSS program would be a new graduate program with several options that stem from existing plant and soil science graduate programs, but also provides the opportunity for the creation of new graduate programs. The existing graduate programs in plant and soil science will continue to operate until existing students matriculate through those programs. We would anticipate a starting date for the IPSS graduate program in the fall of 2011.

A brief perusal of Plant and Soil Science graduate programs across the country shows that most are associated with Plant and Soil Science departments, but none are based on an interdisciplinary approach with separate departments like the IPSS program.

Please find attached as outlined below the documents necessary for consideration of the IPSS program.

- IPSS Proposal
- Request for new doctoral degree form
- Request for change in MS degree program
- Application for new courses: IPS610
- Application for new courses: IPS 625
- IPS 610 course description
- IPS 625 course description
- Sample syllabus IPS 610
- Sample syllabus IPS 625
- Sample distribution of courses in IPSS based on learning objectives
- Assessment Plan Graduate Program in Integrated Plant and Soil Sciences

Sincerely,

Robert L. Houtz

Rolf f. Hong

Mark S. Coyne

Mad Corpe

David A. Van Sanford

Doeld Charleful

xc: Dr. M. Scott Smith, Dean

Dr. Nancy Cox, Associate Dean for Research

Dr. Jimmy Henning, Associate Dean for Extension

Dr. Larry Jones, Associate Dean for Academic Programs

Dr. Larry Grabau, Assistant Dean for Academic Programs

Dr. Todd Pfeiffer, Chair, department of Plant and Soil Sciences

Proposal Integrated Plant and Soil Sciences (IPSS) Graduate Program

Executive Summary

Graduate faculty in the departments of Forestry, Horticulture, and Plant and Soil Sciences, propose an umbrella degree program to provide an integrative and creative approach to graduate education in the plant and soil sciences.

The objectives of this proposal are to build strength in the current graduate M.S. and PhD programs in Crop Science, Plant Biology, Molecular Biology and Biochemistry, Horticulture, and Soil Science by combining these programs into an overall Integrated Graduate Program in Plant and Soil Sciences. The integrated program offers advantages in student recruitment, training, assessment, program student numbers, and administrative efficiency. The program would provide a unique opportunity to cultivate and exploit the benefits that can be derived from an interdisciplinary approach to graduate education and research.

The IPSS program would provide: (a) a dynamic environment that can evolve interdisciplinary credentials and programs tailored to suit the needs of current and future graduate students in the plant and soil science disciplines and develop options responsive to developing scientific trends in agricultural science; (b) interdisciplinary coursework required of all students in the program without creating intrusive changes to the existing graduate curricula; (c) the opportunity for increased visibility and identity for research programs currently without separate graduate identity; (d) a more inclusive approach to graduate education for existing graduate programs and faculty.

The IPSS program represents a positive step toward accomplishing the top 20 goal for the University of Kentucky by increasing the number of masters and doctorate degrees awarded through improved recruitment and training, leading to increased retention of all students interested in advanced education in the plant and soil sciences.

Proposal

1. Programmatic Flexibility and Capacity for Growth

Creation of the IPSS program provides for a novel and competitive way to recruit students into an environment that allows for considerable cross-disciplinary expertise in graduate training. Under the IPSS umbrella, graduate students will be able to work closely with a community of scholars to assemble a curriculum and develop a research program with considerable disciplinary flexibility, tailored to their individual career goals and interests. This programmatic flexibility is also an invitation to faculty to consider how they might facilitate such interdisciplinary training through their own programs or develop programs that would become future graduate degree options in the IPSS program. As an example, an IPSS degree in the future might be awarded with an option in plant medicinal/natural products or environmental systems.

The IPSS program will provide graduate identity to those existing programs that have always trained and graduated students with expertise in disciplines proven to be valuable assets in agriculture. These programs are already interdisciplinary by nature, and would by inclusion as potential graduate degree programs further their own visibility, and moreover increase the attractiveness and recruitment capabilities of the IPSS program as a whole. A model of the potential degree programs offered under IPSS is attached. The support of Forestry faculty for the IPSS program, as well as their desire to have an option in IPSS, is indicated in the attached comments. Forestry has a professional MS program that would remain independent of the IPSS program.

2. Core Courses

The IPSS Program allows existing PhD graduate programs in the plant and soil sciences to maintain their respective individual admission and degree requirements with the exception of IPS 610 and IPS 625 (see below). Each component program, however, will adhere to the goals of general education reform in which graduates demonstrate, through their course selection, competence in four specific areas: understanding and ability to employ processes of intellectual inquiry; competence in employing methods of quantitative reasoning; competent written, oral, and visual communication skills; understanding of the complexities of global citizenship and making informed choices in a multicultural world. The latter two education goals are specifically addressed in the objectives of the core curriculum: IPS 610, IPS 625, and PLS 772.

The IPSS program requires all M.S. and PhD graduate students to enroll in IPS 610 (1 credit, Trans-Disciplinary Communications in IPSS) and IPS 625 (2 credits, Trans-Disciplinary Research in IPSS) at least once (course descriptions attached). These courses represent a minor 3 credit addition to current credit hour requirements for existing plant and soil science graduate programs, and are interdisciplinary, topic driven courses, interfaced with current seminar programs in the plant and soil science disciplines. It is anticipated that a minimum of three IPSS graduate faculty members will coordinate and host these courses. Each student will also be required to enroll at least once in PLS 772/773 (1 credit, Seminar in Plant and Soil Sciences or Plant Physiology) to reflect their competence in public presentation skills.

The environment established by IPS 610/625 and the associated students and faculty reflects a concerted effort to address an emerging concern regarding the lack of intellectual community development in today's graduate programs. Specifically, while much emphasis is placed on the

mechanics of graduate education, such as curriculum development and preparation for qualifying exams, less attention is paid to the culture and development of graduate students as future scholars (see "The Importance of Intellectual Community", *The Chronicle of Higher Education*, December 14, 2007). Active engagement of graduate students across a wide-array of disciplines fosters the camaraderie and sense of community that ultimately lead to the involvement of graduate students in the day-to-day activities and endeavors that give faculty professional satisfaction. IPS 610/625 provides an outlet for intellectual discussion and dialogue among students, faculty, and guest speakers on a philosophical as well as scientific basis. The strong emphasis in IPS 610/625 on graduate student participation, hosting outside speakers, and critical evaluation of scientific presentations, all with the assistance of several faculty members will allow the IPSS program to develop the intellectual community necessary for the IPSS program and students to succeed.

3. Other Course Requirements

Each option within the IPSS program will meet the minimum requirements of the Graduate school for the awarding of M.S. (24 graduate credit hours) and PhD (36 graduate credit hours of which at least 18 hours are taken in residence) degrees. The subsequent amount and composition of coursework will be individually developed by the graduate faculty in each discipline specific to the needs, training, and career goals of each student in that option.

4. Learning Outcomes

At the completion of their program, graduates of the M.S. and Ph.D. program in IPSS will:

- A. Have acquired extensive knowledge of the science and technology that supports research, education, and technological innovation in plant sciences, soil sciences, environmental science, and agriculture.
- B. Be conversant with the literature, current concepts, and experimental methods that support research, teaching, outreach, and technological innovation in plant sciences and soil sciences and their application to agriculture and environmental sciences.
- C. Have acquired skills in critical and analytical thinking and in communication that may be applied to research, education, outreach, industry, and government.
- D. Have acquired those elements of professionalism necessary for rewarding and developing careers in plant science and soil science devoted to research, education, outreach, agriculture and agribusiness, and the environment.

5. Awarding of Degrees

Degrees are awarded in IPSS with additional identification of the option reflecting a student's programmatic emphasis, such as crop science, forest science, horticultural science, plant biology or soil science.

6. Administration

We anticipate that the new IPSS Program will commence in Fall 2011. At this time admission to existing doctoral programs in Crop Science, Plant Biology, and Soil Science will cease and students will only be admitted to the IPSS program.

Students already enrolled in Crop Science, Plant Biology, and Soil Science will have the option to continue their existing program or be grandfathered into the new IPSS program. The doctoral programs in Crop Science, Plant Biology, and Soil Science will be suspended once the last enrolled student has graduated. Because several part-time students are enrolled in these programs, the final date of suspension is indeterminate. Likewise, beginning in Fall 2011 all students currently in the M.S. in Plant and Soil Science will have the option to be grandfathered into the new M.S. in IPSS program, or continue with their existing program. New students will automatically be enrolled in the M.S. in IPSS and be subject to its requirements.

All faculty that are currently members of the Graduate Faculties in Crop Science, Plant and Soil Sciences, Plant Biology, and Soil Science – including adjunct members – will be automatically enrolled in the Graduate Faculty in IPSS at either the associate or full rank, depending on their highest current standing in any graduate faculty.

a. Director of Graduate Studies

There will be an overall Director of Graduate Studies (DGS) for the program who will serve as the official contact for the Graduate School. Duties and responsibilities of the IPSS DGS are as outlined in the Graduate School Bulletin. The IPSS DGS will coordinate all correspondence and interactions with the Graduate School and all individual degree requirements for students who elect to receive an IPSS degree using a collection of the existing course and degree requirements from the options associated with the IPSS program. Because of the size of the graduate program, and the time demands on the DGS, it is envisioned that this position will carry a significant administrative distribution of effort assignment.

The DGS for the IPSS program is appointed by the Dean of the Graduate School, with recommendations from college administration, graduate faculty, and respective departmental chairs. Ultimately, the success of the IPSS graduate program will necessitate more than implementation of new graduate courses, programs, and educational philosophies. For this reason, the position of DGS represents an important component of the program. Like any new endeavor that seeks commonality, cohesiveness, and change where none currently exist, much will depend on perception. The DGS for the IPSS program must be an individual with passion and conviction for the principles described above as well as the ability to forge new programs and challenges for IPSS graduates that make them the highly successful scholars they deserve to be.

The current DGS of each existing PhD and M.S. program (or their successor) will continue in that role, maintaining the same responsibilities for coordinating graduate student progress to degree, until all students have graduated. All responsibilities for recruitment and management of new students in IPSS, however, will be coordinated by the new graduate committee appointed to that role.

b. Graduate Program Steering Committee

The IPSS DGS will be assisted by a committee of representatives from each option represented by the umbrella program. A Graduate Program Committee comprised of the DGS, department chairs, and additional faculty members from each of the departments participating in the program (appointed by the respective department chairs) will be responsible for overall direction of the degree. These faculty members will help identify candidates for recruitment, opportunities for student support, and provide interested students with program- and faculty-specific information. In addition, the committee will be responsible for reviewing applications for admissions and will make recommendations on which applicants should be admitted with departmental support. Final decisions on admission will include consideration of availability of support. The committee members will be chosen by the DGS and the chairs of the participating departments, in consultation with the program faculty, and be appointed to a five-year term. The DGS and the chairs will annually solicit input from the program faculty as to the performance of the committee members

c. Admission

A. Application

Application forms for Admission and Assistantships/Fellowships can be obtained and completed on-line from the Graduate School:

http://www.research.uky.edu/gs

In addition, applicants will supply a cover letter (specifying, if known, areas of interest or faculty they are interested in working with), unofficial copies of transcripts, and at least three letters of recommendation and send them to:

Director of Graduate Studies Integrated Plant and Soil Sciences Graduate Program University of Kentucky Lexington, KY 40546-0312

B. Requirements for Admission

Evaluation for admission is based on the student's academic record, GRE scores, and letters of recommendation. The Graduate School has set requirements for admission as outlined by the Graduate School Bulletin, i.e., B.S. degree from an accredited institution, a grade point average of 2.75 on a 4.0 scale, and Graduate Record Examination (GRE) scores. However, a graduate program may require a higher grade-point average. The Integrated Plant and Soil Sciences graduate program requires a grade-point average of at least 3.0 and a combined GRE score (Verbal plus Quantitative) of at least 1,000. These minimum requirements may be waived in exceptional cases if sufficient other evidence of the student's ability to perform graduate work is presented.

The University of Kentucky requires minimum TOEFL scores of 550 (paper-based), 213 (computer-based), or 79 (internet-based) or an IELTS score of 6.5 for all international students whose first language is not English. International students who receive college degrees from US universities and universities in other designated English-speaking countries may be exempted from taking the TOEFL test.

Individual options in IPSS may require a specific academic background.

d. Requirements

Existing graduate programs in the plant and soil sciences maintain their respective individual admission prerequisites, degree requirements, and professional expectations. All M.S. and PhD graduate students will enroll in IPS 610 (Trans-disciplinary Communications in IPSS – 1 cr) and IPS 625 (Trans-disciplinary Research in IPSS – 2 cr). All students will create a discipline-specific committee (consistent with Graduate School Requirements - 3 members for the M.S. program and 4 members for the PhD Program) and individualized program of study within one year, and satisfy basic Graduate School requirements for residency, examination, and good standing.

e. Orientation

Each fall at the beginning of the semester, the IPSS program will conduct an orientation for new and returning students. The orientation will include an introduction to rules and procedures, such as travel and purchasing, an overview of faculty programs in IPSS (with the potential for poster displays), a discussion of the importance of attendance and participation in seminars, and opportunities for scholarships, fellowships, and other financial support.

f. Registration

New graduate students will be coded as students in the Integrated Plant and Soil Sciences (IPSS) Curriculum for purposes of identifying these students.

g. Advising

Students are assigned advisors in three ways. Ph.D. students who enter the program undecided on a major advisor or option will work with a faculty member from their option and/or the DGS to prepare a program of studies for the first year and a set of program rotations if applicable. Those students entering the program electing to work with an individual faculty member from the outset will work with that faculty member as their advisor.

h. Preparatory Background

So that all entering graduate students are at an academic level to successfully complete their graduate program, entering students need to have minimum preparation in scientific courses. The following courses or their equivalent are the minimum levels of preparation expected of students entering the IPSS program:

MA 113 the first semester course in calculus

PHY 201 the first semester course in physics

CHE 230 the first semester course in organic chemistry

All of the options have also found that additional training in such areas as basic biology, biochemistry, chemistry, crop science, plant biology, microbiology, and soil science, (as some examples) promote student success. It is the prerogative of the student's advisory committee to address and correct any deficiencies in a student's academic background by requiring additional coursework.

i. Teaching Requirement

There is no formal teaching requirement for IPSS graduate students, but students interested in pursuing a career in teaching will be encouraged to explore obtaining the Graduate Certificate in College Teaching and Learning offered through the graduate school. Information on the certificate can be found at:

http://www.research.uky.edu/gs/bulletin/current/GraduateCertificates

In addition, the students should consult the program graduate handbook for a listing of opportunities to gain teaching experience.

j. Publication Requirement

The IPSS program believes that publication of research in refereed journals is the key to successful academic careers and represents the final objective of any research project. It is also an essential form of evaluating the success of the student and the academic program. Therefore, it is imperative that students gain this skill during their academic training. To this end, the IPSS program requires each M.S. or Ph.D. student to have submitted a manuscript based on their dissertation or thesis work to an appropriate refereed journal, selected in consultation with their advisory committee, prior to the dissertation or thesis defense. However, because circumstance can arise to prevent this, this requirement can be waived by the DGS upon the recommendation of the student's advisory committee.

k. Plan of Studies and Annual Review of Progress

Each student will establish, in consultation with their advisory committee, a proposed set of courses to be taken and the arrangement for fulfilling any service requirement. This will be forwarded, with the advisory committee's approval, to the DGS.

Each student will be required, at a minimum, to meet with their advisory committee once each year. At this meeting, the progress of the student towards fulfilling the requirements for the degree will be reviewed and discussed. The results of this determination will be communicated to the student in writing with a copy sent to the DGS. Further information about program evaluation can be found in the proposed assessment plan for IPSS. Grounds for termination of a student from the IPSS Program include (but are not limited too): academic probation, failure to demonstrate satisfactory progress in research.

l. Curriculum

The curriculum in IPSS consists of 24 or 36 credit hours of coursework as specified in the accompany requests for change in the M.S. in Plant and Soil Sciences and New Doctoral Program in IPSS. The M.S. in IPSS requires a common core of IPS 610, IPS 625, and PLS 772 and one graduate level statistics course in addition to a minimum of 16-17 hours of disciplinary courses.

The Ph.D. in IPSS requires coursework to demonstrate competence in four areas: Communication and Professionalism (4 cr)(met by taking a common core of IPS 610, IPS 625, and PLS 772). Basic Scientific Knowledge (9 cr), Computational and Analytical Assessment and Skills (3-4 hours), and Disciplinary Knowledge and Skills (19-20 hours). The accompanying distribution of courses and sample curricula illustrate a menu of courses sufficient to demonstrate those competencies, and how a student might design a personal curriculum to that effect. Per Graduate School rules, 9 credit hours of graduate level coursework may be accepted in partial fulfillment of these requirements.

The prequalifying residency requirement may be met by any model currently used by the Graduate School for that purpose (e.g. receipt of an M.S. degree at UK plus two consecutive semesters of full time enrollment). Based on the curriculum requirements, an incoming student would typically be able to sit for qualifying exams no sooner than the end of their third semester of residence.

i. Curriculum evaluation

The success of the curriculum will be evaluated on a regular basis by the Graduate Program Steering Committee based on results obtained from annual assessment as specified in the program assessment plan.

ii. Creation of New Options

New options within the IPSS program may be created at any time when a core group of faculty (minimum of four) develop an appropriate option-specific disciplinary core and demonstrate they have the interest of at least three graduate students in that option. A majority vote of the IPSS graduate faculty will suffice to approve the new option.

iii. Removal of Options

In the event that a core group of four faculty cannot be maintained within a specific option, that option will no longer be available to incoming students. Currently enrolled students will retain the right to have that option appear on their graduate and records or to switch to another option. Options that are unable to maintain a minimum enrollment of three students on a three-year rolling average will no longer be made available to incoming students. Currently enrolled students will retain the right to have that option appear on their graduate records or to switch to another option.

5. Recruitment

Implementing the IPSS graduate program provides new opportunities for consolidated graduate student recruitment efforts. A web page will be developed in which interested parties are directed to a link for the College of Agriculture web site indicating Graduate programs in Plant and Soil Sciences,

Forestry, and Horticulture. The IPSS Program will also seek to directly recruit students from existing national and international student populations through invited speakers and the encouragement of IPSS participants and faculty to visibly display appropriate materials at societal meetings, and advertising campaigns with notices in national and international journals.

6. Advantages of IPSS

The IPSS Program will provide the motivation and means to accomplish several important goals.

- A. Provide a critical mass of students necessary to maintain graduate program status.
- B. Maintain graduate identity of existing well-recognized programs that have trained and graduated students with expertise in disciplines proven valuable to agriculture and natural resource management.
- C. Provide interdisciplinary coursework required of all students in the program without creating intrusive changes to existing graduate curricula.
- D. Develop a dynamic environment that can evolve interdisciplinary credentials and programs tailored to suit the needs of all graduate students in the plant and soil science disciplines.
- E. Create opportunities for visibility and identity for research programs currently without separate graduate identity.
- F. Facilitate interdisciplinary activities, and by providing an inclusive approach to graduate education, increase the visibility for existing graduate programs and increase the attractiveness and recruitment capabilities of the IPSS program as a whole.

7. Activities to Date

Trial runs of IPS 610/625 under PLS 597 special topics were offered in Fall 2007, 2008, and 2009 with themes solicited from faculty of "What is the World's Largest Organism?" (2007), "The Global Food Crisis" (2008), and "Biofuels" (2009). Three faculty members from soil science, plant science, and horticulture coordinated the course with approximately 7 graduate students from diverse backgrounds including soil science, tobacco research, turfgrass, plant biology, and crop science enrolled each term. With support from the Associate Dean for Research, two nationally recognized outside speakers (Lynn Margulis, 2007; Pedro Sanchez, 2008) with outstanding publications and contributions in research were recruited to deliver two hour lectures to IPS 625 students followed by an interdisciplinary seminar jointly sponsored by the departments of Horticulture and Plant and Soil Science. IPS 610 students carried the majority of responsibilities for hosting the visiting speakers.

Comments from Forestry faculty:

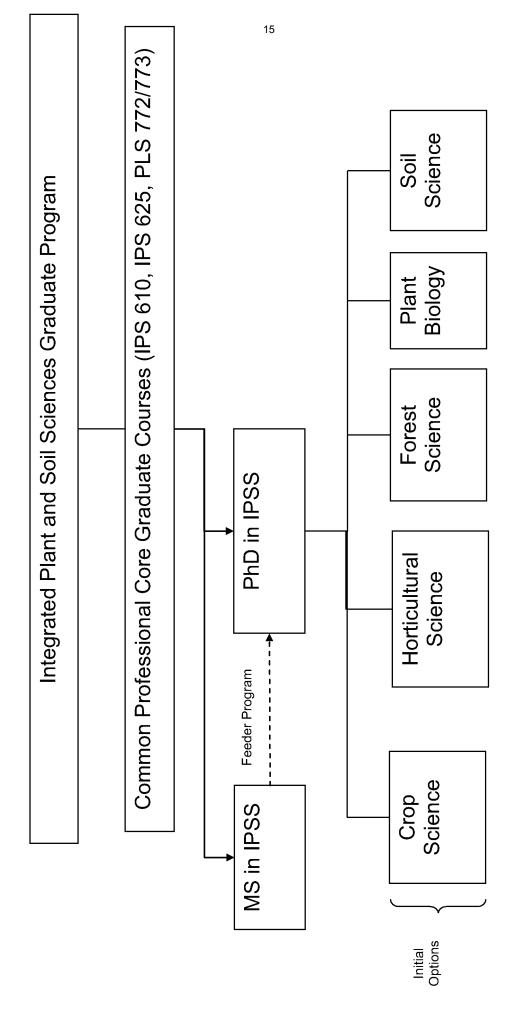
Thanks for your invitation to respond to the proposed IPSS degree program. The proposal has been discussed at length by the Forestry Graduate Program Committee, as well as by our Department faculty as a whole. In general, we think the proposal is a great move in the right direction of establishing umbrella graduate degree programs in the College. We see our participation in the IPSS program as follows:

- The proposed IPSS degree program would be appropriate for some Ph.D. students of the Department of Forestry.
- Ph.D. students of the Department of Forestry would enroll in the IPSS program on a case-by-case basis, as appropriate for individual students.
- Several Department of Forestry faculty members should become members of the IPSS graduate program when it is established.
- Most M.S. students of the Department of Forestry would not enroll in the IPSS degree program, although there may be rare exceptions for individual students.
- If and when the College of Agriculture establishes one or more additional multidisciplinary umbrella graduate degree programs organized like the IPSS program (e.g., perhaps a Natural Resources program), then it may become feasible for most or all M.S. students of the Department of Forestry to be enrolled in the umbrella degree programs.

I hope our input is useful. We look forward to further discussions as the IPSS proposal and proposals for other umbrella graduate programs move forward.

Cheers, Dave Wagner

IPSS Structural Model



REQUEST TO CLASSIFY PROPOSED PROGRAM

| <u>Sect</u> | ion I (REQUIRE | <u>:D)</u> | | | | | | | |
|-------------|---|------------------------|------------------------------------|--------------------------------|--|--|--|--|--|
| 1. | The proposed r | | will be (please check one): | * | | | | | |
| | <u> </u> | Undergraduate* | ☐ Masters* ☐ Doctoral* | Professional* | | | | | |
| 2. | 2. Have you contacted the Associate Provost for Academic Administration (APAA)? | | | | | | | | |
| | | e of contact: 12/15/09 | | | | | | | |
| | NO (Con | tact the APAA prior t | o filling out the remainder of thi | s form.) | | | | | |
| 3. | Degree Title: Integrated Plant and Soil Sciences | | | | | | | | |
| 4. | Major Title: | NA | | | | | | | |
| 5. | Option: | Crop Science, Hort | icultural Science, Forest Science | , Plant Biology, Soil Science | | | | | |
| 6. | Primary College | e: Agriculture | | | | | | | |
| | | , | | | | | | | |
| 7. | Primary Depart | tment: Plant and So | oil Sciences | | | | | | |
| 8. | CIP Code (supp | lied by APAA) 01. | 1199 | | | | | | |
| 9. | Accrediting Age | ency (if applicable): | NA | | | | | | |
| 10. | Who should be | contacted for furthe | er information about the propose | ed new degree program: | | | | | |
| | Name: Bob Ho | | | | | | | | |
| | | | Email: rhoutz@uky.edu | Phone: 257-1758 | | | | | |
| 11. | Has the APAA | determined that the | proposed new degree program i | s outside UK's band? | | | | | |
| | } <u></u> | | II* on a separate sheet.) | | | | | | |
| | NO (This fo | orm is complete. Prir | nt PAGE ONE & submit with appr | opriate form for new program.) | | | | | |
| | | | | | | | | | |
| Sect | Section II (Attach separate pages.) | | | | | | | | |
| | I. Submit a one- to two- page abstract narrative of the program proposal summarizing: how this | | | | | | | | |
| ' - | program will prepare Kentuckians for life and work; any plans for collaboration with other institutions; | | | | | | | | |
| and | and any plans for participation in the Kentucky Virtual University. | | | | | | | | |
| | | | | a. Causuadananaduaka | | | | | |
| | | | scription and complete curriculu | | | | | | |
| | | = | e-required courses; University St | | | | | | |
| | courses; major courses; option courses; electives; any other requirement. Include how program will be evaluated and how student success will be measured. Evaluative items may include, but are not limited | | | | | | | | |

III. Explain resources (finances, facilities, faculty, etc.) that are needed and available for program

academic performance in suggested program electives.

to retention in the major from semester to semester; success rate of completion for core courses; and

implementation and support.

^{*} After filling out this form, you must also submit a form for New Undergraduate Program, New Master's Program, or New Doctoral Program. There is no form for new professional programs.

(Attach completed "Application to Classify Proposed Program"¹)

GENERAL INFORMATION

| College: Agriculture | | Departm | nent: | : Plant and Soil Science, Horticultur Forestry | | orticulture, | | | | | |
|---|---|---------|---|--|---------------------|--------------|---|--------|------------------------|-----|--------------------------------------|
| Major Nar | me: <u>Inte</u> | grat | ed Plant and Sc | oil Sciences | Degree ⁻ | Γitle: | <u>PhD</u> | | | | |
| Formal Option(s): Crop Science, Horticultural Science, Forestry, Plant Biology, Soil Science Specialty Formal Option(s) | | | | | | | | | | | |
| Date of Co | Date of Contact with Associate Provost for Academic Administration ¹ : 12/15/09 | | | | | | | | | | |
| Bulletin (y | Bulletin (yr & pgs): CIP Code ¹ : <u>01.119.01</u> Today's Date: <u>02/23/2010</u> | | | | | | 02/23/2010 | | | | |
| Accreditin | ıg agency (| if ap | pplicable): | | | | | | | | |
| Requested | d Effective | Dat | e. Seme | ster following | annroval | 0 | R X | Snec | ific Date ² | . F | all 2011 |
| Requester | a Encecive | Duc | c. | Jeer romowing | approva. | | |) Spec | ine Date | | |
| Dept Cont | act Persor | 1: | Mark Coyne | | Phone: | <u>257-</u> | <u>4202</u> | | Email: | | <u>coyn00@email.</u> <u>7.edu</u> |
| 1. Number of transfer credits allowed: (Maximum is Graduate School limit of total of 9 hours (or 25% of the credit hours needed to fulfill the pre-qualifying residency requirement.) 2. Residence requirement: (Minimum of one year before and after Qualifying Exams.) | | | | | | | | | | | |
| 3. Langua | ge(s) and/ | or s | kill(s) required: | | | N | None | | | | |
| 4. Provisi | ons for mo | nito | oring progress a | and terminatio | n criteria: | | Annual review of progress; unsatisfactory progress (see attached Assessment Plan) | | | | |
| 5. Total credit hours required: | | | 3 | <u>36</u> | | | | | | | |
| 6. Required courses : | | | <u>II</u> | <u>IPS 610, IPS 625, PLS 772</u> | | | | | | | |
| 7. Required distribution of courses within program: | | | | 4 Common Hours, 9 Basic Science Hours, 3 Computational Hours, 20 Disciplinary Hours | | | | | | | |
| 8. Minor | 8. Minor area or courses outside program required: | | | | N | None | | | | | |
| 9.Distribu | tion of cou | ırse | s levels require | d (400G-500/6 | 000-700): | <u>A</u> | All courses 400G +; 50% of Courses 500+ | | | | |
| 10. Qualit | fying exam | inat | 10. Qualifying examination requirements | | | | Written and Oral | | | | |

14

¹ Prior to filling out this form, you MUST contact the Associate Provost for Academic Administration (APAA). If you do not know the CIP code, the APAA can provide you with that during the contact.

Programs are typically made effective for the semester following approval. No program will be made effective until all

approvals are received.

11. Explain whether the proposed new program (as described in numbers 1 through 10) involve courses offered by another department/program. Routing Signature Log must include approval by faculty of additional department(s).

No other courses required outside the participating departments.

12. Other requirements not covered above:

One seminar presented each year; one exit seminar, dissertation; submitted or published work prior to final dissertation exam.

13. What is the rationale for the proposed new program? Include specific references to accreditation requirements if applicable.

The multidisciplinary nature of current research demands that students have the flexibility to pursue multiple paths toward their graduate degrees yet still be prepared with fundamental skills required of the professional scientist. The creation of the IPSS program enables it to be fully integrative among three distinct disciplines (Crop Science, Soil Science, Plant Physiology) while maintaining disciplinary focus on topics of student interest. The core courses (IPS 610, IPS 625, PLS 772/773) prepare the student to interact with diverse colleagues in plant and soil sciences and provides the background to function in a professional manner through written and verbal presentation of research ideas and results. Within the program the student has the ability to create an individual course of study in a specific option that satisfies their interests and disciplinary requirements.

Signature Routing Log

General Information:

Proposal Name: Integrated Plant and Soil Sciences

Proposal Contact Person Name: Mark Coyne Phone: 257-4202 Email: mscoyn00@email.uky.edu

INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

| Reviewing Group | Date Approved | Contact Person (name/phone/email) | Signature |
|---------------------------------------|---------------|--|----------------|
| Horticulture Faculty | 01/15/10 | Robert L. Houtz / 257-1758 / rhoutz@uky.edu | Rolf L. Hough |
| Plant and Soil Science | 01/22/10 | Todd Pfeiffer / 257-5020 / tpfeiffe@uky.edu | Sould the flow |
| Forestry | 3/15/10 | Michael J. Lacki / 257-3217 / mlacki@uky.edu | helfl |
| Graduate Curriculum Comm, COA/SHES | 3/5/10 | Larry J. Grabau/257- 1885/Igrabau@email.uky.edu | Lang Johnston |
| | | 1 1 | |

External-to-College Approvals:

| Council | Date Approved | Signature | Approval of Revision ³ |
|------------------------------|---------------|--------------------------------|--------------------------------------|
| Undergraduate Council | | | |
| Graduate Council | | 2010.08.16 13:54:43 -04'00' | |
| Health Care Colleges Council | | | |
| Senate Council Approval | | University Senate Approval | |

| Comments: | |
|-----------|--|
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³ Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

UNIVERSITY OF KENTUCKY REQUEST FOR CHANGE IN MASTERS DEGREE PROGRAM

| Prog | ram: | M.S. IN PLANT AND SOIL | SCIENCES | MANAGEM (1970) | NOSCILIERO DE TOTO DE | |
|---------|--|--|---|---|---|--|
| Depa | artment/Division: | PLANT AND SOIL SCIENC | ES/HORTICULTU | RE | | |
| Coll | in grants - to the state of | AGRICULTURE | Bulletin pp | 290-292 | | |
| Degi | ree Title (Old): | MS IN PLANT AND SOIL SCIENCES | Major (New): | MS IN INTEG | GRATED PLANT AND SOIL | |
| CIP | Code: | 01.1199 | HEGIS Code: | ······································ | | |
| | rediting Agency (it icable): | *************************************** | | | | |
| Nesse A | CHANGE(S) | IN PROGRAM REQUIREM | IENTS | | | |
| | | | Cun | ent | Proposed | |
| , | Number of transfer credits allowed (Graduate School limit: 9 hours or 25% of coursework) | | 9 | | 9 | |
| 2. | Residence requir | rement (if applicable) | NA | | NA | |
| 3. | Language(s) and | or skill(s) required | NA | | NA | |
| 4. | Termination crite | eria | UNSATISFACT PROGRESS | TORY | UNSATISFACTORY PROGRESS | |
| 5. | Plan A requireme | ents* | 24 GRADUATE | E CREDIT | 24 GRADUATE CREDIT | |
| | | | HOURS 12 HOURS AT 600+ EXIT SEMINAR | | HOURS 12 HOURS AT 600+ EXIT SEMINAR | |
| 6. | Plan B requireme | ents* | 30 GRADUATE HOURS 15 HOURS AT | | 30 GRADUATE CREDIT HOURS 15 HOURS AT 600+ | |
| 7. | (At least one hal | ourse levels required f must be at 600+ level & two organized courses) | 12 HOURS AT 16 HOURS IN C COURSES | | 12 HOURS AT 600+ 16 HOURS IN ORGANIZED COURSES | |
| | | ····· | | *************************************** | | |

| 8. | Required courses (if applicable) | NA | IPS 610 – 1 CREDIT |
|-----|---|-------------------------|---------------------------|
| | | | IPS 625 – 2 CREDIT |
| | | | PLS 772 – 1 CREDIT |
| 9. | Required distribution of courses within program | DISCIPLINARY CORE (6–9) | PROGRAM CORE (4) |
| | (if applicable) | BASIC RESEARCH(4-6) | GRADUATE STATISTICS (3-4) |
| | | SPECIALIZATION (9-14) | SPECIALIZATION (16-17) |
| 10. | Final examination requirements | ORAL DEFENSE | ORAL DEFENSE |
| | | | |

11. Any other requirements not covered above

II. RATIONALE FOR CHANGE(S)

If the rationale involves accreditation requirements, please include specific references to those requirements.

Graduate students in plant and soil sciences and horticulture come from diverse backgrounds with diverse interest. The existing rigid core structure of the program is an impediment to students who arrive with significant prior experience or who have specific career objectives. The revised program maximizes the flexibility of coursework to which students may be exposed, yet provides key common skills in required courses. The exposure of all students in the IPS program to the value of interdisciplinary approaches to problem solving as well as the merits of cross-disciplinary education will serve as a cohesive tool for generating mutual respect and admiration among IPS students, and help them develop more creative approaches to problem solving in their own research programs. This goal is accomplished by two new IPSS courses (IPS 610, IPS 625). The program also retains a basic requirement for experience in presenting seminars and graduate level statistics as a prerequisite of MS level students to have experience with data collection, interpretation, and analysis.

NOTE: To the extent that proposed changes in 5, 6 or 8 above involve the addition of courses in other programs, please submit correspondence from the other program(s) pertaining to the availability of such courses to your students.

^{*} If there is only one plan for the degree, plans involving a thesis (or the equivalent in studio work, etc.) should be discussed under Plan A and those not involving a thesis should be discussed under Plan B.

UNIVERSITY OF KENTUCKY REQUEST FOR CHANGE IN MASTERS DEGREE PROGRAM PAGE 2 of 2

Signatures of Approval:

| Horticulture - 01/15/10 Plant and Soil Sciences - 01/22/10 | |
|---|---|
| | Rold I That I had the first |
| Date of Approval by Department Faculty | Reported by Department Chair |
| Graduate Curriculum Committee—03/05/10 | L. A Grabay |
| Date of Approval by College Faculty | Reported by College Dean |
| | |
| *Date of Approval by Undergraduate Council | Paparted by Undergradu 12010!08!16413:55:33 |
| *Date of Approval by Graduate Council | Reported by Graduate Council Chair |
| *Date of Approval by Health Care Colleges Council (HCCC) | Reported by HCCC Chair |
| *Date of Approval by Senate Council | Reported by Senate Council Office |
| *Date of Approval by University Senate | Reported by Senate Council Office |
| *If applicable, as provided by the Rules of the University Senate | |
| ACTION OTHER THAN APP | ROVAL |

Rev 07/06

IPSS PROGRAM DISTRIBUTION OF COURSES BASED ON LEARNING OBJECTIVES

Common Courses – Communication and Professionalism (4 hours)

IPS 610 IPS 625 PLS 772 or 773

Basic Knowledge (Core Science) (9 hours)

Core Science varies by discipline and student interest but can be overlapping BCH 401G, 517, 604, 607, 608, 610, 611, 612, 615 BIO 430G, 431G CHE 440G, 442G, 450G GLY 450G, 530, 585 PLS 620, 622, 623

Computational and Analytical Assessment and Skills (3-4 hours)

STA 570, 671, 672, 676 Biostatistics STA 680, 681 Spatial Statistics (PLS 655 proposed) MA 411G, 432G, 433G BIO 520

Disciplinary Knowledge and Skills (19-20 hours)

(If not already taken to satisfy the Basic Knowledge requirement)

| Crop Science | Horticultural Science | <u>Forestry</u> | Plant Biology | Soil Science ^a |
|--------------|-----------------------|-----------------|---------------|---------------------------|
| PLS 502 | ENT 530 | BAE 532 | BCH 604 | PLS 450G |
| PLS 510 | ENT 667 | BIO 551 | BCH 610 | PLS 455G |
| PLS 514 | NRC 420G | BIO 575 | BCH 611 | PLS 456G |
| PLS 515 | NRC 470G | CHE 565 | BCH 612 | PLS 470G |
| PLS 531 | PLS 515 | FOR 599 | BIO 510 | PLS 477G |
| PLS 602 | PLS 520 | FOR 601 | BIO 520 | PLS 468G |
| PLS 664 | PLS 525 | FOR 602 | BIO 615 | PLS 566 |
| PLS 676 | PLS 605 | FOR 609 | BIO 632 | PLS 567 |
| | PPA 400G | FOR 612 | BIO 633 | PLS 573 |
| | PPA 640 | PLS 650 | IBS 607 | PLS 575 |
| | | PLS 660 | PGY 607 | PLS 576 |
| | | | PLS 601 | PLS 650 |
| | | | PLS 609 | PLS 660 |
| | | | PLS 620 | PLS 671 |
| | | | PLS 622 | PLS 712 |
| | | | PLS 623 | PLS 741 |
| | | | PPA 670 | |
| | | | PPA 671 | |
| | | | PPA 672 | |
| | | | PPA 673 | |
| | | | | |

^a Soil Science represents at least five traditional disciplinary areas: Biology, Chemistry, Fertility, Pedology, and Physics.

It is recognized that there is considerable cross-disciplinary academic preparation in any specific option. Students are expected to draw from a variety of courses in each discipline while constructing their degree programs.

Sample Academic Programs

Option Soil Science (Emphasis in Microbiology and Ecology) – Total Credit Hours = 39

Common Courses - Communication and Professionalism (4 hours)

IPS 610

IPS 625

PLS 772

Basic Knowledge (10 hours)

BCH 401G, 517, 604 or 607

Computational and Analytical Assessment and Skills (4 hours)

STA 570

Disciplinary Courses (21 hours)

PLS 468G Environmental Soil Fertility

PLS 566 Soil Microbiology

PLS 573 Soil Classification and Morphology

PLS 575 Soil Physics

PLS 660 Adv. Soil Microbiology

PLS 671 Soil Chemistry PPA 400G Plant Pathology

Option Soil Science (Emphasis in Soil Fertility) – Total Credit Hours = 36

Common Courses - Communication and Professionalism (4 hours)

IPS 610

IPS 625

PLS 772

Basic Knowledge (9 hours)

CHE 440G, 442G, 450G

Computational and Analytical Assessment and Skills (4 hours)

STA 671, 672

Disciplinary Courses (19 hours)

PLS 468G Environmental Soil Fertility

PLS 573 Soil Classification and Morphology

PLS 575 Soil Physics

PLS 650 Soil Plant Relations

PLS 671 Soil Chemistry

PLS 712 Adv. Soil Fertility

Option Plant Biology (Emphasis in Seed Biology) - Total Credit Hours = 37

Common Courses - Communication and Professionalism (4 hours)

IPS 610 IPS 625

Basic Knowledge (9 hours)

BCH 401G, 604, 620

Computational and Analytical Assessment and Skills (4 hours)

STA 570

Disciplinary Courses (21 hours)

PLS 556 Seed Production and Technology PLS 602 Principles of Yield Physiology PLS 622 Physiology of Plants I PLS 623 Plant Physiology II PLS 657 Seed Biology

PLS 664 Plant Breeding

Option Crop Science - Total Credit Hours = 36

Common Courses - Communication and Professionalism (4 hours)

IPS 610 IPS 625 PLS 772

Basic Knowledge (9 hours)

PLS 609, 622, 623

Computational and Analytical Assessment and Skills (3 hours)

STA 661

Disciplinary Courses (20 hours)

PLS 556 Seed Production and Technology PLS 597 Plant Genomics PLS 602 Principles of Yield Physiology PLS 620 Plant Molecular Biology PLS 676 Quantitative Genetics PPA 400G Plant Pathology PPA 640 Identification of Plant Diseases

Assessment Plan - Graduate Program in Integrated Plant and Soil Sciences

Graduate Program:

Integrated Plant and Soil Sciences (IPSS) MS and PhD

Contact:

Mark S. Coyne, Director of Graduate Studies
Soil Science PhD Program
Department of Plant and Soil Sciences,
N-122N Agricultural Science Building
Telephone 859 257 4202 Fax 859 257 3655 email: mscoyn00@email.uky.edu

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Inventory of Statements – Graduate Program in Integrated Plant and Soil Sciences (IPSS)

1. Mission Statement

The IPSS Program will provide the motivation and means to accomplish these goals:

- G. Develop a dynamic environment that can evolve interdisciplinary credentials and programs tailored to suit the needs of all graduate students in the plant and soil science disciplines.
- H. Provide a rigorous learning environment that is conducive to success and one that prepares graduates to deal with global issues.
- I. Ensure that students will develop the intellectual, technical, and communication skills needed for their success following graduation.
- J. Create opportunities for visibility and identity for research programs currently without separate graduate identity.
- K. Facilitate interdisciplinary activities by providing an inclusive approach to graduate education.

2. Articulated Learning Outcomes

At the completion of their program students will have achieved these learning outcomes:

- 1. Will have acquired an extensive knowledge of the sciences and technology that support research, education, and technological innovation in plant, soil, and environmental sciences (Abbreviated as 'Knowledge').
- 2. Will be conversant with the literature, current concepts, and experimental and analytical methods that support research, teaching, and technological innovation in plant, soil, and environmental sciences, and in their application to agriculture and the environment (Abbreviated as 'Skills').
- 3. Will have acquired skills in critical and analytical thinking and in communication skills that may be applied to research, education, industry, government, and public service (Abbreviated as 'Communication').
- 4. Will have acquired those elements of professionalism necessary for rewarding and developing careers in plant, soil, and environmental sciences in research, education, production agriculture, agribusiness, government, and public service ('Professionalism').

3. Methods of Assessing Learning Outcomes Assessment Plan: Graduate Program in IPSS

- 1. <u>Baseline Assessment:</u> Incoming graduate students shall be assessed (see attached rubric) during their first semester when they are required to take two common classes (IPS 610 "Trans-Disciplinary Communication in IPSS" and IPS 625 "Trans-Disciplinary Research in IPSS"). Instructors, participating faculty, major advisor(s), and the Director of Graduate Studies (DGS), shall make a baseline assessment of each student by completing and summarizing the assessment rubric. The baseline assessment of graduate students starting in the spring semester shall be determined during the first meeting of the advisory committee.
- 2. <u>Annual Assessments</u>: For each student, all members of the advisory committee (3+ for M.S. students and 4+ for PhD students), and the Director of Graduate Studies, shall assess progress by completing and summarizing the assessment rubric at the first meeting of the advisory committee and every year as part of the annual review of progress (required by the Graduate School), which must be completed by 31 May each year.
- Post Qualifying Assessment: Doctoral candidates shall be assessed after the qualifying examination by the members of their graduate committee and the DGS.
- 4. <u>Assessment at Final Examinations</u>: An assessment of progress of each M.S. and PhD candidate shall be made during or immediately after the final examination by the advisory committee persons.
- 5. <u>Assessment of Major Artifacts</u> (Theses and Dissertations): The advisory committees and DGS will be asked to provide a summative evaluation of theses and dissertations after they are finalized (see attached Final assessment of Thesis or Dissertation).
- 6. <u>Post-Graduation Assessment</u>: Graduates and their major advisor shall be asked to complete the assessment rubric one year after completion of program.
- 7. <u>Annual Summary by Calendar Year</u>: The DGS will collate individual assessments and provide the Associate Dean of Academic Programs with an annual summary of assessments of learning outcomes for the graduate program by 1 July each year.
- 8. <u>Annual Summary by Academic Year</u>: The DGS will compile metrics to determine progress by the students by year in program (ie. summary of metrics of students in first year, second year students, etc.)

9. Graduate students shall have access to individual assessments (the identity of the individual assessors shall be protected) and have the right to discuss and challenge outcomes consistent with the terms specified for <u>Student Rights and Responsibilities</u>.

The various point-in-time assessments of individual graduate students are related to the artifacts (e.g. presentations, publications, theses, dissertations) they generate at those points-in-time. The progress is largely evaluated on a formative basis during the annual reviews of progress, but also on a summative basis for the purpose of making competitive awards and on a summative basis at the end of a student's program to evaluate the productivity of the program as a whole.

| Annual Assessment of Learning | | Summary Year 20 | |
|-------------------------------|---------|-----------------|--|
| Name: | | <u> </u> | |
| Program: | Option: | | |
| Current GPA | - | | |
| Cumulative GPA | | | |

| Outcome* (Score) | Lagging (1) | Progressing (2) | On track (3) | Advanced (4) | Score |
|---------------------|-------------|-----------------|--------------|-----------------|-------|
| Knowledge | | | | | |
| Skills | | | | | |
| Communications | | | | | |
| Professionalism | | | | | |

^{*}To be completed by the major advisor until the thesis/dissertation committee is formed and then by the members of the thesis/dissertation committee

Summary of Annual Progress

Summary Year 20__

Name: _

| Outcome | Lagging (1) | Progressing (2) | On track | Advanced | Score |
|------------------|-------------|-----------------|----------|----------|-------|
| (Score) | | | (3) | (4) | |
| Rate of progress | | | | | |
| Productivity | | | | | |
| Quality | | | | | |

^{*}To be completed by the major advisor until the thesis/dissertation committee is formed and then by the members of the thesis/dissertation committee

Annual Review of Progress of Graduate Students in Integrated Plant and Soil Sciences (IPSS)

For the Period 1 June 20__ to 31 May 20__

| Name: | | Date of mo | ost recent review:_ | |
|-------------------|---|---------------------|------------------------|------------|
| Research area/t | hesis/dissertatio | n title: | | |
| | | | | |
| _ | nittee: Date submi y: SOI, PSSC, CR | | School: | |
| *Role | Core | Graduate Faculty | Status (Full/Assoc) | Department |
| Chair | | | , | |
| Co-Chair | | | | |
| Member | | | | |
| Member | | | | |
| Member | | | | |
| | | | | |
| *See bulletin for | committee compos | sition | | |
| Date of start of | graduate progran | n: | | |
| Date of most red | cent advisory cor | nmittee meeting | : | |

Thesis/Dissertation Defense

| Yea | ar | 20 |) |
|-----|----|----|---|
| | | | |

| Outcome* (Score) | Poor Lower 25% (1) | Good 25-50% (2) | Superior 50-75% (3) | Excellent Upper 25% (4) | Avg. Score |
|---------------------|--------------------------|-----------------------|---------------------|-------------------------------|------------|
| Knowledge | | | | | |
| Skills | | | | | |
| Communication | | | | | |
| Professionalism | | | | | |

^{*}Relative to previous students the committee members have evaluated.

Final Assessment of Thesis/Dissertation

Year 20___

| Outcome* (Score) | Poor Lower 25% | Good 25-50% | Superior 50-75% | Excellent Upper 25% | Avg. Score |
|---------------------|-------------------|----------------|--------------------|------------------------|------------|
| | (1) | (2) | (3) | (4) | |
| Knowledge | | | | | |
| Skills | | | | | |
| Communication | | | | | |
| Professionalism | | | | | |

^{*}Relative to previous theses and dissertations the committee members have evaluated.

4. Curriculum Map

In the IPSS graduate program students complete4 credit hours of required IPSS and PLS courses to reinforce and apply **Communications** and **Professionalism** and a minimum of 20 additional credit hours for the M.S. or 32 credit hours for the PhD. Eighteen of the hours at the PhD level may be waived with evidence of a prior M.S. degree, Nine hours of graduate level course work may be transferred into the program. All M.S. and PhD students must complete a minimum of 18 hours of courses in residence. These hours must include representative basic sciences (e.g. chemistry, biochemistry, physiology), computational courses (e.g. statistics and modeling), and disciplinary courses. The number and composition of the coursework selected is at the discretion of the thesis or dissertation committee. Coursework is designed to reinforce and apply **Knowledge** and **Skills**. The attached curriculum map for graduate level coursework available in Plant and Soil Sciences and Forestry illustrates a suite of courses available to IPSS students to enhance learning in all desired outcomes of the curriculum (**Knowledge**, **Skills**, **Communication**, **Professionalism**).

COMPOSITE CURRICULUM MAPS FOR GRADUATE CLASSES OFFERED IN INTEGRATED PLANT & SOIL SCIENCES

I = Outcome is Introduced; E = Outcome is Emphasized; R = Outcome is Reinforced; A = Outcome is Applied.

| | 1 - Curcome is introduced; E - Curcome is | | Cutcome is nemior cea, A | '. L | |
|----------|---|-------------|--------------------------|------------------|-------------------|
| | | Outcome 1 | Outcome 2 | Outcome 3 | Outcome 4 |
| CLASS | Subject matter | "Knowledge" | "Skills" | "Communications" | "Professionalism" |
| | | | | | |
| IPS 610 | Transdisciplinary Communication in IPSS | 3 | | | R |
| IPS 625 | Transdisciplinary Research in IPSS | H | I | R | R |
| NRC 450G | Biogeochemistry | R | R | 丑 | I |
| NRC 455G | Wetland Delineation | A | A | 3 | R |
| NRC 456G | Constructed Wetlands | 田 | Э | 田 | R |
| NRC 470G | Soil Nutrient Management | R | A | 3 | R |
| NRC 477G | Land Treatment of Waste | Y | Y | R | ப |
| PLS 468G | Soil Use and Management | R | V | Y | R |
| PLS 501 | Reclamation of Disturbed Land | | | | |
| PLS 502 | Ecology of Economic Plants | A | S | R | ш |
| PLS 510 | Forage Management and Utilization | A | A | R | ш |
| PLS 512 | Turf Management | | | | |
| PLS 514 | Grass Taxonomy and Identification | | | | |
| PLS 515 | Turf Management | | | | |
| PLS 520 | Fruit and Vegetable Production | R | ш | Ш | I |
| PLS 525 | Greenhouse Floral Crop Management | | | | |
| PLS 531 | Field Schools in Crop Pest Management | | | | |
| PLS 547 | | | | | |
| PLS 556 | Seed Production and Technology | R | R | A | A |
| PLS 557 | Seed Vigor | | | | |
| PLS 566 | Soil Microbiology | E | R | R | E |
| PLS 567 | Methods in Soil Microbiology | A | Ī | В | E |
| PLS 573 | Soil Morphology and Classification | 3 | R | R | R |
| PLS 575 | Soil Physics | 日 | Ξ | R | Ш |
| PLS 576 | Laboratory in Soil Physics | Y | I | 3 | 3 |
| PLS 581 | Chemical Analysis of Soils and Plants | A | 1 | E | |
| PLS 597 | Special Topics | | | | |
| PLS 599 | Special Problems | A | I | 日 | A |
| PLS 601 | Molecular and Cellular Genetics | R | | | |
| PLS 602 | Principles of Yield Physiology | A | A | R | ш |

| | | Outcome 1 | Outcome 2 | Outcome 3 | Outcome 4 |
|---------|--|-------------|-----------|------------------|-------------------|
| CLASS | Subject matter | "Knowledge" | "Skills" | "Communications" | "Professionalism" |
| PLS 605 | Physiological Mechanisms in Horticultural Plants | | | | |
| PLS 609 | Plant Biochemistry | I | E/1 | A/R | R |
| PLS 619 | Cytogenetics | | | | |
| PLS 620 | Plant Molecular Biology | I | Ι | R | R |
| PLS 622 | Physiology of Plants I | I | I | | |
| PLS 623 | Physiology of Plants II | I/R | I/R | | |
| PLS 640 | Identification of Plant Diseases | | | | |
| PLS 642 | Biosynthesis of Natural Products | | | | |
| PLS 650 | Soil-Plant Relationships | R | A | | |
| PLS 657 | Seed Biology | | | | |
| PLS 660 | Advanced Soil Biology | R | A | R | R |
| PLS 664 | Plant Breeding I | | | | |
| PLS 671 | Soil Chemistry | R | 1 | 田 | |
| PLS 676 | Quantitative Inheritance in Plant Populations | | | | |
| PLS 697 | Special Topics in Plant and Soil Science | A | I | E | |
| PLS 712 | Advanced Soil Fertility | R | I | E | R |
| PLS 721 | Pedogenic Processes | | | | |
| PLS 741 | Clay Mineralogy | R | R | Ξ | R |
| PLS 748 | Master's Thesis Research | A | A | A | R |
| PLS 749 | Dissertation Research | V | A | A | R |
| PLS 767 | Dissertation Residency Credit | | | | |
| PLS 768 | Residence Credit for Master's Degree | | | | |
| 692 STd | Residence Credit for the Doctor's Degree | | | | |
| PLS 772 | Seminars in Plant and Soil Sciences | R | R | AÆ | 4 |
| PLS 799 | Research in Plant and Soil Sciences | A | A | A | R |
| | | | | | |
| | | | | | |

5. Assessment Cycle and Assessment Plans

Assessment of each student occurs on an annual basis. Assessment of all learning outcomes will occur on a two- or three-year rotation consistent with the normative time to degree for M.S. and PhD students. During a student's initial orientation to graduate study, or at the time of the first committee meeting (if the student starts in Spring), the methods of assessment will be explained to the student and advisory committee by the DGS or appropriate designee.

Intermediate assessment of progress in the achievement of learning outcomes

There will be one annual assessment in the progress of individuals to achieving the learning outcomes. A detailed rubric is provided for assessing the student by his/her advisory committee and the DGS. At a minimum, the detailed rubric will be completed at the time of the student's first committee meeting, immediately after the qualifying exams (for PhD students), and at the completion of the dissertation defense. The summary assessment will be completed by the DGS. The assessment will be concurrent with the Annual Review of Progress required by the Graduate School. Reports must be completed by 31 May and filed with the relevant departmental office and Associate Dean of Academic Programs' office by 31 May.

Examples of Specific Assessment Criteria for Each Learning Outcome

Knowledge

Cumulative GPA > 3.0

Completion and successful defense of an M.S. thesis or PhD dissertation Employment involving original and independent teaching, research, or extension

Skills

External Recognition (e.g. awards, profiles)
Manuscripts Submitted /Accepted/Published
Courses/Labs Taught
Proposals Submitted/Accepted/Funded
Employment involving original and independent teaching, research, or extension

Communication

Presentations given
Manuscripts Submitted /Accepted/Published
Proposals Submitted/Accepted/Funded
PhD dissertation completed and accepted

Professionalism

Society Memberships Certifications Department/University/Community /Society Committee Service

Definitions:

Learning Outcome #1

Basic Interest in Science – Does the student demonstrate an appreciation and understanding of sciences that extends beyond their discipline or specific project?

Knowledge of Fields of Sciences That Contribute to Soil Science – Does the student have knowledge in multiple areas of soil science?

Knowledge of Literature in the Field – To what extent is the student familiar with all information sources related to their area of study?

Knowledge of Leading Research Institutions and Leading Researchers – Does the student know the leading laboratories and programs specific to their area of study?

Familiarity with Computer Technology in Soil Science – Has the student demonstrated familiarity with computers and the most basic software packages?

Environmental Sciences – Is the student familiar with the broad range of environmental sciences that impact or are impacted by Soil Science?

Learning Outcome #2

Quantitative Skills – How adept is the student at mathematical computations, equations, and other routine calculations?

Laboratory Skills – Does the student exhibit familiarity with a wide variety of laboratory skills and competence in their performance?

Field research Skills - Does the student show familiarity with and competence in field studies?

Experimental Design and Analysis – Does the student understand different experiment designs, comparisons, and statistical analysis?

Records and Documentation – Does the student keep good, clear, records that enable them to easily document their activities and data?

Interpretation and Critical Analysis of Research Data – Is the student able to evaluate data, understand its implications, and assess its implications?

Familiarity With Sources and Capabilities of the Internet as Applicable to Soil Science – Can the student use internet resources to facilitate both the treatment of data and its assessment?

Learning Outcome #3

Fundamental Knowledge of Agriculture – Does the student demonstrate familiarity with the scope of domestic and international agricultural systems?

Originality/Innovation – Does the student demonstrate the potential to develop new ideas and find creative applications for old concepts?

Action on Ideas – Does the student show evidence of personal motivation or must they be prompted? Verbal Communication – How easy is it for a student to communicate thoughts and concepts verbally to a wide variety of audiences?

Written Communication – How easy is it for the student to write easily understood thoughts and concepts to a wide variety of audiences?

Research Publications – Has the student published and are they likely to publish on an independent basis?

Media Skills – How familiar is the student with developing presentations in various communication media?

Teaching Skills – Does the student show the capacity to instruct others in the concepts they have learned? Grant Writing Ability – Does the student show the ability to independently support their work through writing grants for extramural agencies?

Learning Outcome #4

Ethics – Does the student appreciate and follow established norms of scientific behavior?

Interpersonal Skills – Does the student interact well and contribute to groups as necessary?

Attitude and Bearing – Is the student personable and interactive when appropriate to the situation?

Work habits - Does the student commit the effort required to complete tasks?

Productivity – Does the student produce deliverables as called for in assigned tasks?

Punctuality – Is the student on time when needed?

Leadership/Mgmt Potential – Does the student demonstrate the capacity to coordinate group activities and supervise others?

Responsibility – Can the student be counted on to perform tasks with minimal supervision?

Plagiarism – Does the student understand and avoid plagiarizing other work?

Civics – Does the student demonstrate behavior associated with good citizenship?

Maturity – Does the student act in an age-appropriate manner?

Scientific Associations – Is the student a member of and/or understand the purpose of participating in scientific associations?

The Assessment rubric is currently being evaluated with the most recent PhD candidates in the Soil Science PhD program as well as graduating students in the M.S. in PLS program.

February 14, 2011

Minutes- Senate Academic Programs Committee

February 9, 2011 3-4 pm, Room 414 CRMS

Members in Attendance

Daniel Wermeling, Andrew Hippisley, Marilyn Duncan, Karen Badger, Esther Dupont-Versteegden, Michael Arrington, Mary Arthur

Members Absent

Greg Wasilkowski

Agenda

- New Graduate Certificate in Pharmaceutical Science
- New Ph.D. in Integrated Plant and Soil Science

The New Graduate Certificate in Pharmaceutical Science was presented by the Ester Dupont-Versteegden to members of the Senate Academic Programs Committee. The program offers College of Pharmacy students a pathway to study basic pharmaceutical sciences in the professional program. The goal is to encourage pharmacy students to consider a Ph.D. in pharmaceutical sciences upon graduation of the pharmacy school. The Gateway complements 2 other Gateway certificate programs offered by the College of Pharmacy. The educational requirements were not initially clear to the committee. A request was made for clarification on credits – the sponsors made a satisfactory response. The program was considered highly desirable by the committee members and well aligned with student and faculty initiatives.

A motion was made to approve the Gateway Certificate in Pharmaceutical Science. The motion was seconded and all members present voted in the affirmative – the motion carried.

The new Ph.D. program in Integrated Plant and Soil Science was presented by Greg Wasilkowski (written assessment) and Dan Wermeling (presentation) to members of the Senate Academic Programs Committee. The notion of the proposal is to integrate 5 different graduate programs under a single heading. The proposal states a number of advantages relates to critical mass of instructors, single entry point for applications and students, and single DGS, and ability to improve space management. Committee members commented that this proposal was the best submission In terms of thoughtfulness and breadth of consideration and could be a model for other submissions. The only question raised was whether the 5 current graduate programs would be eliminated. The sponsor stated that they would be suspended or withdrawn when all students in the various programs have completed or are no longer in the program.

A motion was made to approve the Integrated Plant and Soil Science Ph.D. Program. The motion was seconded and all members present voted in the affirmative – the motion carried.

April 29, 2010

TO: David Randall

Senate Council 201 Main Bldg. CAMPUS 0032

Dear Dr. Randall,

I am transmitting to you the Proposal for the Graduate Certificate in Pharmaceutical Science.

The Graduate Council approved this proposal on April 29, 2010.

January Blackwell 2010.04.30 10:46:25-04'00'

Jeannine Blackwell, Dean The Graduate School

Cc: Sheila Brothers

Brothers, Sheila C

From: Lindsay, Jim D.

Sent: Tuesday, April 13, 2010 10:04 AM To: Blackwell, Jeannine; Nikou, Roshan

Cc: Romanelli, Frank; Price, Cleo; Brothers, Sheila C; LaRoche, Adrea S.; Anderson, Heidi Milia

Subject: HCCC Transmittal: Pharm. Sci. Graduate Certificate

April 13th, 2010

TRANSMITTAL

TO: Jeannine Blackwell, Chair and Roshan Nikou, Coordinator

Graduate Council

FROM: Heidi Anderson, Chair and Jim Lindsay, Coordinator

Health Care Colleges Council

On April 9th, 2010 the Health Care Colleges Council approved the following proposal via expedited consent agenda and is now forwarding it to the Graduate Council to approve:

College of Pharmacy

New Graduate Certificate in Pharmaceutical Science

The materials to implement the requested action are posted at: http://www.uky.edu/curriculum/

Cc Frank Romanelli Cleo Price Shelia Brothers Adrea LaRoche Heidi Anderson

Jim Lindsay

Health Care Colleges Council Coordinator Associate Provost for Faculty Affairs Office University of Kentucky, 205 Frazee Hall Lexington, KY 40506-0031 Ph. (859) 323.6638 www.uky.edu/Provost/AcademicCouncil/council.php



UNIVERSITY OF KENTUCKY

Dream * Challenge * Succeed

November 16, 2009

Dr. Jeannine Blackwell Dean, The Graduate School University of Kentucky Lexington, KY

Dean Blackwell:

Please accept the attached documentation as part of our application to create a "Pharmaceutical Sciences Research Gateway (PSRG)" leading to a graduate certificate in Drug Discovery and Development (GCDDD). As noted in the proposal, the purpose of the PSRG is to provide a meaningful opportunity for Pharm.D. students to gain valuable experience in the research field through graduate coursework and active participation in research activities. This curriculum will include a combination of 12 hours of graduate coursework, including three hours of independent study, with active participation in laboratory rotations, our summer research program, and part of experiental training in the fourth year of Pharmacy School. We believe that this graduate certificate will help distinguish our students, and make them more competitive for graduate school or other advanced educational opportunities.

I have been asked to serve as the Graduate Certificate Director, and have been working on this project for several months in coordination with various groups of faculty. The initial proposal was sent to all Graduate Faculty in Pharmaceutical Sciences for feedback and comment. After the proposal was approved by Graduate Faculty, it was reviewed and approved by our Graduate Program Committee, and by the College of Pharmacy Curriculum Committee. We believe the proposal is now ready for consideration by the Graduate Council. Please do not hesitate to contact me directly if you need any additional information.

Sincerely,

Jim Pauly, Ph.D.

Jun Pauly

Associate Professor of Pharmaceutical Sciences

323-8164

jpauly@uky.edu



College of Pharmacy Office of Education 301 Pharmacy Building Lexington, KY 40536-0082 (859) 257-5802 http://www.mc.uky.edu/Pharmacy/depts/oei/

MEMORANDUM

TO: Graduate School/Graduate Council

FROM: Frank Romanelli, Pharm.D., MPH, BCPS

Associate Dean and Associate Professor, Member Graduate School Faculty

RE: COP Certificate in Pharmaceutical Science

DATE: December 8, 2009

Please find enclosed a formal proposal for consideration by the Graduate School in regards to the formal establishment of a 'CertificateCurriculumin Pharmaceutical Sciences' to be administered by the College of Pharmacy faculty. Documents within this submission include: certificate summary and procedures, syllabi from relevant graduate courses, a description of the SURP (Summer Research Program), and supporting letters from various College officials. This proposal reflects a culmination of several months work by the Colleges faculty and administration in designing and developing this offering. The proposal was presented to and approved by the Colleges curriculum committee and subsequently the faculty as a whole.

The certificate curriculum will offer Doctor of Pharmacy students enrolled at the College of Pharmacy an opportunity to pursue and foster interests in basic science research as it relates to drugs and drug discovery. The curriculum has been developed so that students enrolled in the professional program may focus their 8 hours of elective options in pharmaceutical science coursework which can then be augmented through both the Summer Research Program (SURP) and research based clerkships (completed in the final professional year). The over-arching goal for this proposed certificate curriculum is that the availability of this educational experience will facilitate interest in and transition to formal graduate training when interested students complete the Doctor of Pharmacy program.

Thank you for your time and consideration. Should you have any questions – please feel free to contact me at any time.

Graduate Certificate in Pharmaceutical Science

Purpose/Rationale

Integration of Pharm.D. students into the research environment is expected to have benefits for both faculty and students. The PSRG will provide current Pharm.D. students and other health care professionals with a graduate-level introduction to research in the Pharmaceutical Sciences. This Gateway will be designed for students interested in research within the pharmaceutical industry, hospitals, academia, or governmental agencies. The development of this certificate curriculum is expected to increase the number and competitiveness of Pharm.D students that seek postgraduate training opportunities, including the Ph.D. program in Pharmaceutical Sciences. This program could also be the springboard for future graduate programs including the Pharm.D./Ph.D. program and possibly an new M.S. program in Pharmaceutical Sciences.

Training Faculty

- Dr. James Pauly (Gateway Coordinator)
- Dr. Patrick McNamara
- Dr. Robert Yokel
- Dr. Linda Dwoskin
- Dr. Paul Bummer
- Dr. Chuck Loftin
- Dr. Penni Black
- Dr. Greg Graf
- Dr. Kim Nixon
- Dr. Steven Van Lanen
- Dr. Jurgen Rohr
- Dr. Audra Stinchcomb
- Dr. Todd Porter
- Dr. Mark Leggas

Gateway Outcomes

Following completion of this Gateway, the student will:

- 1. Appreciate the role of drug discovery in the process of pharmaceutical product development.
- 2. Understand basic elements of experimental design, performance of experiments, statistical analysis and interpretation of results.
- 3. Have an increased understanding of the ethical use of animals in biomedical research, and the ethics of science.
- 4. Develop an abstract and poster presentation describing the results of their research project. The poster will be presented to at a local or national pharmacy organization meeting.

Admission Requirements

- Undergraduate transcripts
- GRE Scores
- Acceptance into UK Graduate School
- Minimum GPA of 3.0 in Pharm.D. coursework
- Personal statement
- Letters of recommendation
- Previous research experience
- Identification of a mentor
- Completion of the certificate application form

Students who do not hold an awarded bachelor's degree must have at least 90 hours of undergraduate credits to apply to the Graduate School. An undergraduate grade point average of at least 2.75 on a 4.0 scale is required. In addition to course grades, the applicant's performance on the GRE, and letters of recommendation will be considered to establish admission eligibility. Priority for admission to this certificate curriculum will be given to students currently enrolled in the Doctor of Pharmacy degree program in good standing. Students must maintain a 3.0 grade-point average within the certificate curriculum in order to qualify for successful completion.

Certificate Specific Requirements

- A minimum of 9 Hours of Graduate Coursework
- 3 Hours of independent study in pharmaceutical research
- Participation in the Pharmaceutical Sciences (PS) Summer Research Program in the Professional Year (PY) 1-PY2 and/or PY2-PY3 year
- (2) 6 week research-based rotations in PY4
- Presentation at local or national meeting

Schedule for Completion

PY1 – Fall Semester - PHS 910 - Introduction to Gateways Module [core course]

PY1 – Spring Semester - Gateway Application and Selection

Summer 1 - PS Summer Research Program (1 or 2 years) [core experience]

PY2 - Fall Semester - PHS760 (Introduction to Pharmaceutical Sciences) [course course]

PY2 – Spring Semester – PSRG elective

Summer 2 - PS Summer Research Program (1 or 2 years) [core experience]

PY3 – Fall Semester - PSRG elective

PY3 – Spring Semester - 3 Hours of independent study in Pharmaceutical research [course]

PY4 - (2) six-week research rotations, presentation at local or national meeting [core experience]

Possible Elective Courses

PHS 545 Sterile Products

PHS 612 Quantitative Pharmacodynamics: Pharmacokinetics

PHS 620 Biosynthesis of Natural Products

PHS 630 Pharmaceutical Rate Processes

PHS 631 Equilibrium Phenomena in Pharmaceutical Systems

PHS 665 Ethical Issues in Clinical Research

PHS 760-x Neurobiology of Abused Drugs

PHS 760-x Drug Targets and Actions

PHS 762 Bioorganic Mechanisms

PHS 764 Drug Development Regulation & Clinical Research

IBS 604 Cell Signaling

IBS 605 Experimental Genetics

PHA 522 Systems Pharamcology

STA 570 Basic Statistical Analysis

STA 671 Correlation/Experimental Design

Expected Enrollment - 5 to 8 students/yr

Brothers, Sheila C

From: Davis, Alison F

Sent: Monday, February 28, 2011 2:37 PM

To: Brothers, Sheila C
Subject: RE: update

The AASC committee voted on the proposal for a new grade type in the college of pharmacy. The motion was for a positive recommendation of the new grade type.

Thanks, Alison

Alison Davis, PhD
Executive Director, Community and Economic Development Initiative of Kentucky (CEDIK)
Associate Professor
University of Kentucky
Agricultural Economics
411 Charles E. Barnhart Bldg.
Lexington, KY 40546-0276

Phone: 859-257-7260 Fax: 859-323-1913

E-mail: alison.davis@uky.edu

Proposal to Change the Grading System for Pharmacy Practice Experience Courses

Submitted by: Office of Experiential Education Department of Pharmacy Practice and Science College of Pharmacy

September 8, 2010

Background:

The Department of Pharmacy Practice and Science adopted a grading policy (1) specifying that grades in all experiential course work in the professional curriculum (i.e. Introductory Pharmacy Practice Experiences, IPPE I and IPPE II; and Advanced Pharmacy Practice Experiences, APPE) should be assigned on the following basis:

Pass with honors (Represents exceptionally high achievement in all course requirements as a result of aptitude, effort and intellectual initiative. Credit hours under this grade will count towards graduation, but will not be used in calculating grade-point averages.)

Pass (Represents high achievement as a result of ability and effort and reflects student competence in all course requirements. Credit hours under this grade will count towards graduation, but will not be used in calculating grade-point averages.)

Fail (Represents a marginal or unsatisfactory level of achievement in any of the course requirements. Credit hours under this grade will not count towards graduation but will be used in calculating grade-point averages

The Office of Experiential Education and Department faculty agreed that the new grading system for experiential courses would be phased in as part of the implementation of the new experiential curriculum for students graduating in May 2012 (Curriculum 2012).

The new advanced pharmacy practice experience courses (APPEs) are under development for implementation in May 2011. When preparing the new APPE course/course change proposals for University approval, the Office of Experiential Education was informed that the University grading system currently does not define or recognize a Pass with Honors grade. Thus, we are now proposing the establishment of a new grade for the College of Pharmacy – Pass with honors – so we can carry out the policies adopted by the Department.

Rationale for new grade:

Historically, the College has utilized the letter grade system for assignment of grades to the advanced practice experience courses. Due to the nature of the clinical rotations and the difficulty associated with evaluation of clinical practice, coupled with the fact that many of the evaluations are conducted by off-campus, voluntary faculty preceptors, little discrimination in grading occurs in these courses. In fact, the lack of grade discrimination has basically defaulted these courses to a two grade scale — A for everyone

who is performing satisfactorily (including those performing at an exceptionally high level) and B for those who are performing less satisfactorily. Because the advanced practice experience courses comprise approximately 25% of the curriculum, the overwhelming number of A grades and associated quality points disproportionately inflate cumulative GPAs while not differentiating those who perform at an exceptionally high level. This issue is not unique to the University of Kentucky. Faculty from Virginia Commonwealth University recently described their approach to development of a competency based assessment process for APPEs. In the article, the authors state "the supervising faculty members were not discriminating between grades sufficiently and were assigning students unreasonably high grades in the APPE program." (2) To address this, many practice experience courses in Colleges and Schools of Pharmacy across the country, including Virginia Commonwealth University, University of North Carolina at Chapel Hill, University of Iowa and University of California at San Diego, have moved to the Pass/Fail or Pass/Fail/Honors grading scale.

One potential problem identified by our faculty for utilizing a Pass/Fail option as currently recognized by the University is that the lack of anything other than a Pass grade may provide disincentive for students to perform at their highest level. This situation may occur in the IPPEs that are currently graded on a P/F system. The addition of Honors to the Pass/Fail grading option would encourage top students to strive for this highest level of achievement.

Courses that will use new grade:

All clinical practice experience courses, including both the introductory (IPPEs) and advanced practice experience courses (APPEs), will use the new grade. The majority of these clinical practice experiences are off-campus where students work under the supervision of community-based faculty preceptors.

These courses currently are:

PPS 928 – Introductory Pharmacy Practice Experience I (4 hours) now graded P/F

PPS 948 – Introductory Pharmacy Practice Experience II (4 hours) now graded P/F

PPS 991 – Advanced Community Pharmacy Practice (6 hours) now graded A,B,C etc.

PPS 992 – Advanced Hospital Pharmacy Practice (6 hours) now graded A,B,C etc.

PPS 993 – Ambulatory Care Pharmacy Practice (6 hours) now graded A,B,C etc.

PPS 994 – Acute Care Inpatient Pharmacy Practice (6 hours) now graded A,B,C etc.

PPS 995 – Patient Care Pharmacy Practice Elective (6 hours) now graded A,B,C etc.

PPS 996 – Non-Patient Care Pharmacy Practice Elective (6 hours) now graded A,B,C etc.

It is important to note that all courses that would utilize the new grade system will be reviewed through the regular course change approval process at which time the assessment rubrics documenting how the new grade would be applied will be provided. For an example of how competency-based assessment rubrics are applied to Honors/Pass/Fail courses, please review pages 211 – 250 of the Professional Experience Program manual of the UNC School of Pharmacy. (3)

Other courses in the PharmD curriculum will continue to use the previously established general grading system i.e. A,B,C etc. These courses are taught almost entirely by on campus faculty and are such that performance can be more easily measured and reflected in an A,B,C system.

Abbreviation and explanation of new grade type:

The Pass with Honors grade could be abbreviated PH and would represent an exceptionally high level of achievement in a course taken on a Pass with Honors/Pass/Fail basis. As indicated above, credit hours successfully completed under this grade will count towards graduation but will not be used in calculating semester or cumulative grade point averages.

- 1. Policy on Grading/Evaluation in the PharmD Program, Department of Pharmacy Practice and Science Courses adopted August 5, 2005
- 2. Hill LH, Delafuente JC, Sicat BL, Kirkwood CK. Development of a competency-based Assessment Process for Advanced Pharmacy Practice Experiences. *Am J Pharm Education*. 2006; 70 (1) 1-10.
- **3.** http://pharmacy.unc.edu/programs/the-pharmd/professional-experience-program/preceptors/pepmanual; accessed 9-15-10.

Brothers, Sheila C

From: Rippetoe Freeman, Trish

Sent: Thursday, March 03, 2011 11:06 AM

To: Brothers, Sheila C Cc: Wermeling, Daniel

Subject: FW: pharmacy grade change proposal

From: Rippetoe Freeman, Trish

Sent: Wednesday, March 02, 2011 2:33 PM

To: Davis, Alison F

Subject: pharmacy grade change proposal

Alison,

See below for my responses. Please let me know if you have additional questions. Trish

From: Davis, Alison F

Sent: Monday, February 28, 2011 2:48 PM

To: Rippetoe Freeman, Trish

Subject: pharmacy grade change proposal

Dr. Freeman,

I am the chair of the senate's academic affairs and standards committee. We are currently reviewing your proposal. Our committee needs clarification on a couple of things.

1) The College of Pharmacy also places students with a GPA of < 2.0, on probation or suspension, how does the new grading system figure into this policy?

Students who fail a course under this proposal would automatically be placed on probation (at a minimum) based on our academic performance committee (APC) rules. Students who were already on probation with GPA less than 2.0 who successfully complete rotations with a P or PH would be considered by APC for removal from probation based on two successful semesters of Passing or Honors grades even though the GPA would still remain below 2.0 since the passing or honors grades are not figured into the GPA.

Is the credit hour/grade-point average policy consistent with other pass/fail courses on campus? In the Bulletin, in the Academic Requirements section, it states:

Grade P represents a passing grade in a course taken on a Pass/Fail basis. It may also be assigned by the University Appeals Board in cases involving a violation of student academic rights. Credit hours successfully completed under this grade will count towards graduation but will not be used in calculating grade-point averages.

Grade F represents failure in a course taken on a Pass/Fail basis. It is valued at zero (0) quality points and zero (0) credit hours.

Thus the implications of the grade of P are consistent with the Pharmacy proposal, but if we are reading this correctly, an F grade is not involved in the computation of grade-point average, since it is averaged in at 0 credit hours. Is this correct? If it doesn't match the proposed interpretation of F in the proposal. Is there a different policy for graduate courses? Our plan was to follow current university rules for application of P and F grades, we would only add PH and would follow the rules as outlined in the proposal which make the PH grade consistent with the P grade the University already defines.

Thank you, Alison

SIGNATURE ROUTING LOG

General Information:

| Proposal Type: Course | е | Program 🔀 | Other | |
|------------------------------------|----------------|-------------------------|-----------------------------------|--|
| Proposal Name ¹ (course | e prefix & num | nber, pgm major 8 | & degree, etc.): | Proposal to Change the Grading System for Pharmacy Practice Experience Courses |
| Proposal Contact Person | n Name, | <u>. Trish</u> eeman | Phone: <u>323-</u> <u>1381</u> | Email: trfree@uky.edu |

INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

| Reviewing Group | Date Approved | Contact Person (name/phone/email) | Signature |
|--|------------------|---|-----------------|
| Pharmacy Education Advisory Committee | 9/10/10 | Peggy Piascik / 257-1766 / piascik@uky.edu | Pezopy Princile |
| Pharmacy Practice and Science Committee | 9/14/10 | Jimmi Hatton / 323-0268 / jhatt1@uky.e | Home It |
| College of Pharmacy Curriculum Committee | 9/17/10 | Penni Black / 323-5898 / penni black@uky.edu | @ m |
| College of Pharmacy faculty | 10/1/10 | William Lubawy / 257-5891 / lubawy@uky.edu | Welfilaus |
| | | / / | |

External-to-College Approvals:

| Council | Date Approved | Signature | Approval of Revision ² |
|------------------------------|------------------|----------------------------|--|
| Undergraduate Council | | | |
| Graduate Council | | | |
| Health Care Colleges Council | 10/14/10 | Midi Ma John | • |
| Senate Council Approval | | University Sendte Approval | : |
| | ¢ | | |
| Comments: | | | en de la companya de La companya de la co |

⁴ Proposal name used here must match name entered on corresponding course or program form.
² Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.



Office of the Dean College of Agriculture S-123 Agricultural Science Bldg. North Lexington, KY 40546-0091 (859) 257-4772 Fax: (859) 323-2885 www.uky.edu

MEMORANDUM

TO: Hollie Swanson

Senate Council Chair

FROM: Scott Smith M. Seatt Smith

DATE: November 1, 2010

RE: Departmental Name Change:

From Family Studies to Family Sciences

A name change for the Department of Family Studies in the College of Agriculture has been approved by vote by the following faculty bodies:

Department of Family Studies faculty: October 1, 2010 unanimous approval

COA Chairs: October 13, 2010 unanimous approval

COA Ag Faculty Council: October 22, 2010 unanimous approval

COA Undergraduate Curriculum Committee: October 22, 2010 unanimous approval

COA Graduate Curriculum Committee: October 22, 2010 unanimous approval

The associate deans and I also fully support the name change to Family Sciences. The new name realigns the department name with all program names.

Supporting documents regarding the departmental vote and the curriculum committees' votes are attached. The AFC vote is recorded in the October 2010 minutes, to be posted on their Web site. The chair group does not keep formal minutes but did vote in the affirmative regarding this change.

Thank you.

Attachments



Memo

TO: M. Scott Smith, Dean, College of Agriculture

From: Ronald Jay Werner-Wilson.

Ronald Jay Werner-Wilson.
Family Studies Department Chair

2/10/2011 Date:

Re: Department Name Change Department of Family Studies

College of Agriculture

315 Funkhouser Building

Lexington, KY 40506-0054

(859) 257-7750

Fax: (859) 257-3212

www.uky.edu

Faculty members in the Department of Family Studies voted unanimously to change the name of the department on October 1, 2010 to the Department of Family Sciences. The new name is consistent with the name of our majors.



College of Agriculture
105 Plant Science Building
Lexington, KY 40546-0312

and the control of the control of the North

October 29, 2010

MEMORANDUM

TO: Dean Scott Smith, Ron Werner-Wilson, Lisa Collins, and Larry Jones

FROM: Larry Grabau, Assistant Dean, Curriculum and Assessment

RE: Consideration of Department Name Change by the Undergraduate

Curriculum Committee (UCC) and the Graduate Curriculum Committee

(GCC) of the College of Agriculture

C: UCC Members (Ken Haynes, Vanessa Jackson, Leigh Maynard, David

Williams, Desmond Brown, Ned Crankshaw, Lee Edgerton, Kris Ricketts, Jim Ringe, and Mark Williams) and GCC Members (Mark Coyne, Mike Reed, Randy Weckman, Ron Werner-Wilson, Hazel Forsythe, David

Harmon, Lisa Vaillancourt, Dave Wagner)

On Friday, October 22, 2010, the UCC and GCC met independently to consider

curricular matters. Both groups discussed the proposed name change of the Department of Family Studies to the Department of Family Sciences. In each case motions to approve this change were passed unanimously. Complete minutes are available upon request.

Brothers, Sheila C

From: Denison, Dwight V

Sent: Monday, February 21, 2011 12:33 PM Brothers, Sheila C; Werner-Wilson, Ronald J To:

'Bill Smith'; Debski, Elizabeth A; Ederington, Josh; Farrell III, Herman D; Jasper, Samuel J; Cc:

Lee, Brian D; Maynard, Leigh; Saatman, Kathryn; Scutchfield, Douglas

Subject: RE: New Cmte Item Dept Family Studies Name Change

Shelia.

The Committee for Academic organization and structure met this morning to discuss the proposed name change for the Dept of Family Studies. The name change was approved but we request that a short paragraph on the background of the change be included with the proposal before it goes to the senate council. It was not clear to those in different fields why the change is necessary although we respect the approval of the department faculty that proposed the change. A short description would help clarify the need to the Council and Senate when the proposal moves along for approvals.

From department chair Ron Werner-Wilson, 2-21-11:

undergraduate major as well as all graduate degrees to

Family Science, so the faculty voted to change the

Department name to create a consistent identity and

better reflect the teaching, research, and engagement

"The Department has recently changed the

activities in the Department."

Dwight V. Denison, PhD Professor of Public and Nonprofit Finance Director of Graduate Studies, MPA and MPP programs Martin School of Public Policy and Administration University of Kentucky 415 Patterson Office Tower Lexington KY 40506

Email: dwight.denison@uky.edu

Phone: 859.257.5742

From: Brothers, Sheila C

Sent: Thursday, February 10, 2011 11:53 AM

To: Denison, Dwight V Cc: Werner-Wilson, Ronald J

Subject: New Cmte Item_Dept Family Studies Name Change

Good morning, Dwight! Please find attached and posted at

http://www.uky.edu/Faculty/Senate/committees councils/standing committees/academic organization structure.htm a new proposal for review by your committee.

The proposal is to change the name of the Department of Family Studies. Your contact person for this proposal is the Ron Werner-Wilson, chair of said department.

I have tentatively placed this on the SC agenda for February 28, and the Senate agenda for March 21. Thus, I will need your committee's review by Wednesday, February 28. If this timeline presents a problem, or if you have other questions, please don't hesitate to let me know!

Thank you,

Sheila

Sheila Brothers Staff Representative to the Board of Trustees Office of the Senate Council 203E Main Building, -0032

GR X - Regulations Affecting Employment Section B.2.

(d) <u>Leaves of Absence</u>

(vii) Entrepreneurial Leave

The University encourages faculty employees to engage in entrepreneurial activities and strives to support the efforts of faculty who wish to commercialize their discoveries. Therefore, the pursuit of entrepreneurial endeavors is a valid reason for application for a faculty leave of absence.

The request for entrepreneurial leave, submitted by the faculty person to his or her unit administrator, shall be accompanied by a completed and signed "Entrepreneurial Leave" form and all attachments. The Entrepreneurial Leave form enumerates the terms and conditions of such leaves. The unit administrator shall review the proposal and forward the materials to the dean of the college along with their recommendation. The dean shall forward his or her recommendation to the Provost for approval. Entrepreneurial Leaves shall be reported to the Board of Trustees.



Application for Entrepreneurial Leave

| Name | |
|---|--------------------------------------|
| Department | _ |
| Time period of proposed leave | |
| (not to exceed one year; renewal for a se | cond and final year may be requested |

Attach a draft Distribution of Effort (DOE) form in which the applicant indicates the percentage of time that will be devoted to the outside entity and to the University. Please be specific about the activities (type and percentage of effort) assigned to the faculty person's normal University duties during the period of the proposed leave.

Attach the Conflict of Interest Management Plan. (The applicant should consult with the Associate Dean for Research in the faculty person's college.)

Attach a narrative of the proposed leave activity (1-2 pages). In this narrative, the faculty person should:

- identify the intellectual property being commercialized
- identify the company with which the faculty person will be employed
- identify the position(s) the faculty person will hold (e.g., CEO, Chief Science Officer, etc.)

By signing and submitting this agreement the faculty employee applying for entrepreneurial leave acknowledges that the individual is aware of and agrees to abide by the following terms and conditions:

- The portion of salary and associated benefits assigned to the entrepreneurial leave of absence shall be paid by the outside entity;
- The faculty employee's status as an investigator on all extant grants and contracts during the leave period shall be maintained or reassigned to another investigator, as deemed appropriate by the relevant parties within the University;
- The allocation of time to the performance of leave-related duties with the outside entity will not jeopardize the academic progress of any graduate students under the supervision of the faculty person;
- The faculty employee shall maintain a monthly time sheet to document the performance of continuing University assignment during the leave period (as documented on the faculty person's DOE);
- The faculty employee will notify his or her unit administrator three months before the end of the leave regarding the individual's career direction for the subsequent academic year.

- The period of the leave must be specified and shall not normally exceed one academic year. However, the leave may be extended for a second and final year by the Provost upon the recommendation of the dean.
- After the completion of an entrepreneurial leave, a faculty person shall be eligible for a subsequent entrepreneurial leave after the individual has completed six (6) years of continuous service. Normally "continuous service" is interrupted by a sabbatical leave. The Provost may grant an exception to the six-year eligibility rule when there is a compelling benefit to the University.

By approving this request for entrepreneurial leave, the University agrees to maintain all faculty benefits and privileges, as delineated in *Governing Regulations* X, for the duration of approved leave. An individual's status as a tenured faculty employee shall not be adversely affected by the granting of entrepreneurial leave. Furthermore, a faculty employee who participates in one of the University's approved retirement programs shall have the option to make up the missed employee contributions and receive the corresponding University contributions upon return from approved entrepreneurial leave. Such contributions shall be based on the employee's base salary at the time of the leave (AR 3:1 Section X). The individual on approved entrepreneurial leave is also eligible for the university health credit.

| Signed, | A. |
|--|--------|
| | |
| (Faculty Member's signature) | (date) |
| | |
| (Educational Unit Administrator's signature) | (date) |
| (Dean's signature) | (date) |
| (Provost's signature) | (date) |