

APPLICATION FOR NEW COURSE

1. Submitted by the
College of AGRICULTURE Date: 01/01/2010

Department/Division proposing
course: PLANT AND SOIL SCIENCES

2. Proposed designation and Bulletin description of this course:

Prefix and
a. Number IPS 625

b. Title* TRANS-DISCIPLINARY RESEARCH IN INTEGRATED
PLANT AND SOIL SCIENCES

*If title is longer than 24 characters, offer a sensible title of 24
characters or less: RESEARCH IN IPSS

c. Courses must be described by at least one of the categories below. Include number of actual contact hours per week.

() CLINICAL	() COLLOQUIUM	(X) DISCUSSION	() LABORATORY	() LECTURE
() INDEPEND. STUDY	() PRACTICUM	() RECITATION	() RESEARCH	() RESIDENCY
() SEMINAR	() STUDIO	() OTHER – Please explain:	_____	

d. Please choose a grading
system: Letter (A, B, C, etc.) Pass/Fail

e. Number of credit
hours: 2

f. Is this course repeatable? YES NO If YES, maximum number of credit
hours: 4

g. Course description:

A two-credit course specific to students in the Integrated Plant and Soil Sciences Program. This course is designed to explore the foundations, principles, and philosophies of scientific research in a truly integrative manner with strong emphasis on the value of multidisciplinary approaches to a significant issue in plant and soil sciences. The course may be repeated twice.

h. Prerequisite(s), if any:

GRADUATE STUDENT STANDING

i. Will this course also be offered through Distance Learning? YES NO

If YES, please check one of the methods below that reflects how the majority of the course content will be delivered:

Internet/Web-based Interactive video Extended campus

3. Supplementary teaching component: N/A or Community-Based Experience Service Learning Both

4. To be cross-listed as: _____ / _____
Prefix and Number printed name Cross-listing Department Chair signature

5. Requested effective date (term/year): FALL / 2011

6. Course to be offered (please check all that apply): Fall Spring Summer

7. Will the course be offered every year? YES NO
If NO, please explain: _____

8. Why is this course needed?
Graduate students in plant and soil sciences come from diverse backgrounds with diverse interest. Yet, there is significant commonality in many of the most basic and focused areas of research in the plant and soil sciences that are not communicated in an interdisciplinary or unified manner. The exposure of all students in the IPSS 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 IPSS students, and help them develop more creative approaches to problem solving in their own research programs.

9. a. By whom will the course be taught? Team Taught - Dr. David Van Sanford (Co-ordinator)

b. Are facilities for teaching the course now available? YES NO
If NO, what plans have been made for providing them?

10. What yearly enrollment may be reasonably anticipated?
7

11. a. Will this course serve students primarily within the department? Yes No
b. Will it be of interest to a significant number of students outside the department? YES NO
If YES, please explain.

12. Will the course serve as a University Studies Program course[†]? YES NO
 If YES, under what Area? _____

[†]AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

- traditional – offered in corresponding departments at universities elsewhere
 relatively new – now being widely established
 not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? Yes No

15. Is this course part of a proposed new program? YES NO
 If YES, please name: Integrated Graduate Program in Plant and Soil Sciences (IPSS)

16. Will adding this course change the degree requirements for ANY program on campus? YES NO
 If YES[‡], list below the programs that will require this course:
 This course in conjunction with IPS 625 will serve as the core course requirements in the IPSS graduate program, which includes the existing MS program in Plant and Soil Sciences.

[‡]In order to change the program(s), a program change form(s) must also be submitted.

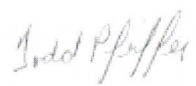
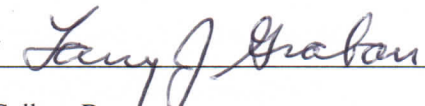
17. The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. Check box if course is 400G or 500. If the course is 400G- or 500-level, you must include a syllabus showing differentiation for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See SR 3.1.4)

19. Within the department, who should be contacted for further information about the proposed new course?

Name: MARK COYNE Phone: 257-4202 Email: mcoyn00@email.uky.edu

20. Signatures to report approvals:

<u>01/22/10</u> DATE of Approval by Department Faculty	<u>Todd Pfeiffer</u> printed name	 Reported by Department Chair	signature
<u>03/05/2010</u> DATE of Approval by College Faculty	<u>Larry J. Grabau</u> printed name	 Reported by College Dean	signature

* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*. (<http://www.uky.edu/USC/New/RulesandRegulationsMain.htm>)

IPS 610 Course Description

A one-credit companion course to IPS 625 specific for graduate students in the Integrated Plant and Soil Sciences program. This course exposes IPSS students to critical skills in publication, grantsmanship, and public presentation. It requires IPSS students to systematically evaluate research presentations from multiple disciplines, present a synthesis of the research topic addressed in IPSS 625, and interact with other members of the college and the university on topics related to plant and soil science issues. The course may be repeated twice.

IPS 625 Course Description

A two-credit course specific to students in the Integrated Plant and Soil Sciences Program. This course is designed to explore the foundations, principles, and philosophies of scientific research in a truly integrative manner with strong emphasis on the value of multidisciplinary approaches to a significant issue in plant and soil sciences. The course may be repeated twice.

**TRANS-DISCIPLINARY RESEARCH IN INTEGRATED PLANT AND SOIL
SCIENCES**
IPS 625 (Section 001) 2 credits
Fall 2010

Lecture (2 hr): W 3-4:50 Rm 460 PSB
Instructors: M.S. Coyne/ R. L. Houtz/ D. Van Sanford
Office Hours: By appointment
Telephones: 257-4202;257-1982;257-5020

PREREQUISITES

Graduate student status.

COURSE DESCRIPTION

A two-credit course specific to students in the Integrated Plant and Soil Sciences Program. This course is designed to explore the foundations, principles, and philosophies of scientific research in a truly integrative manner with strong emphasis on the value of multidisciplinary approaches to a significant issue in plant and soil sciences. The course may be repeated once.

COURSE OBJECTIVES

1. Instill in students a firm grasp, appreciation, and value of multidisciplinary approaches to important problems in the Plant and Soil Sciences.
2. Have students develop and utilize a philosophical approach to research THAT emphasizes broad relationships and significant overlap between diverse disciplines.

METHODS TO MEET OBJECTIVES

The topic for this class will focus on one particular area of research that is prominent and significant in terms of societal impact or impact in the broad area of plant and soil sciences. The topic will represent a theme that will cover all aspects of plant and soil science education. Speakers will be solicited and recruited from all appropriate areas of research with the ability to integrate into this theme. Both the topic and speakers will be different each year, making this course unique for each student.

Students will:

1. Gain fundamental knowledge by attending lecture presentations.
2. Increase scientific interaction between students and faculty on topics related to crucial issues in plant and soil sciences.
3. Gain skills in interpersonal interactions by participating in open discussions for each topic.
4. Gain skills in the synthesis and presentation of information via collaborative grant-writing and discussion.

REQUIREMENTS

1. Attend all class sessions.
2. Participate in class discussions.
3. As part of a group effort, prepare an extramural grant related to a significant topic addressed during the semester.

EVALUATION CRITERIA

There will be a summary powerpoint presentation of the proposed extramural grant. Additionally students will be required to introduce weekly speakers and summarize the general context of the issues to be discussed.

GRADING POLICY

Grades will be awarded based on the following scale:

90 % or greater	A	Superior
80% to 89.9%	B	Very Good
70% to 79.9%	C	Good
< 70%	E	Fail

STUDENT RIGHTS AND RESPONSIBILITIES

From the Student's Rights and Responsibilities

5.2.4.2 EXCUSED ABSENCES: (US: 11/11/85; 2/9/87; 4/12/04) The following are defined as excused absences:

A. Significant illness of the student or serious illness of a member of the student's household (permanent or campus) or immediate family. The instructor shall have the right to request appropriate verification.

B. The death of a member of the student's household (permanent or campus) or immediate family. The instructor shall have the right to request appropriate verification.

* Children of students are considered members of the immediate family (RC: 11/9/94)

* For the purpose of this rule, immediately family is defined as:

· Spouse or child or parent (guardian) or sibling (all of the previous include steps, halves and in-laws of the same relationship); and

· Grandchild or grandparent (US: 4/12/04)

C. Trips for members of student organizations sponsored by an academic unit, trips for University classes, and trips for participation in intercollegiate athletic events. When feasible, the student must notify the instructor prior to the occurrence of such absences, but in no case shall such notification occur more than one week after the absence. Instructors may request formal notification from appropriate university personnel to document the student's participation in such trips.

* Intercollegiate athletic events include club sports registered with the university as well as varsity sports. (RC: 10/18/00)

D. Major Religious Holidays. Students are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day for adding a class.

E. Any other circumstances which the instructor finds reasonable cause for nonattendance. (US: 4/23/90)

Students missing work due to an excused absence bear the responsibility of informing the instructor about their excused absence within one week following the period of the excused absence (except where prior notification is required), and of making up the missed work. The instructor shall give the student an opportunity to make up the work and/or the exams missed due to an excused absence, and shall do so, if feasible, during the semester in which the absence occurred. (US: 11/10/85 and RC: 11/20/87)

If attendance is required or serves as a criterion for a grade in a course, and if a student has excused absences in excess of one-fifth of the class contact hours for that course, a student shall have the right to petition for a "W", and the faculty member may require the student to petition for a "W" or take an "I" in the course. (US: 2/9/87; RC: 11/20/87)

* If a student has an excused absence on a day when a quiz is given, the instructor may not deny permission for a makeup exam and simply calculate the student's grade on the basis of the remaining requirements. (RC: 8/20/87)

* The language "The instructor shall give the student an opportunity to make up the work and/or the exam missed during an excused absence..." implies the student shall not be penalized for the excused absence. (RC: 8/25/95)

* This rule applies to all graded work. (RC: 1/29/03)

6.3.0 ACADEMIC OFFENSES AND PROCEDURES: Students shall not plagiarize, cheat, or falsify or misuse academic records. (US: 3/7/88; 3/20/89)

6.3.1 PLAGIARISM All academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about a question of plagiarism involving their work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism.

Plagiarism includes reproducing someone else's work, whether it be published article, chapter of a book, a paper from a friend or some file, or whatever. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be. Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone.

When a student's assignment involves research in outside sources or information, the student must carefully acknowledge exactly what, where and how he/she has employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain.

6.3.2 CHEATING Cheating is defined by its general usage. It includes, but is not limited to, the wrongfully giving, taking, or presenting any information or material by a student with the intent of aiding himself/herself or another on any academic work which is considered in any way in the determination of the final grade. Any question of definition shall be referred to the University Appeals Board.

Tentative Schedule
IPS 625 – Fall 2010
“The Chemical Basis of Life”

Week	Week of	Speaker	Topic
1	Aug 23		
2	Aug 30		
3	Sept 6		
4	Sept 13		
5	Sept 20		
6	Sept 27		
7	Oct 4		
8	Oct 11		
9	Oct 18		
10	Oct 25		
11	Nov 1		
12	Nov 8		
13	Nov 15		
14	Nov 22	Thanksgiving Break	
15	Nov 29		
16	Dec 6	Group presentation – Course Evaluation	
17	Dec 13	Finals Week	

Sample Schedule from 2009

IPS 625 (Taught under PLS 597): Biofuels – Where Are We Going?

Fall 2009

List of Speakers

Week	Date	Speaker/ Topic or Title
1	August 26	Orientation – Discuss class goals
2	Sept 2	Dr. John Grove – Soils Issues Related to Biofuels
3	Sept 9	Dr. Joe Chappell - Botryococcus: Micro-Algal Biofuel Source
4	Sept 16	Dr. Ray Smith – Biofuel/Forage Dual Purpose Species
5	Sept 23	Dr. Michael Montross – Farm level energy production through corn, methane and other biofuels.
6	Sept 30	Dr. David Hildebrand –Meeting Future Energy Needs: From the Big Bang to Biofuels
7	Oct 7	Drs. Todd Pfeiffer, Morris Bitzer, and Mike Barrett Hands on demonstration of sorghum, switchgrass and miscanthus production to be held at Spindletop Farm
8	Oct 14	Dr. Iin Handayani, Murray State University. “Environmental Effects of Palm Oil Production in Indonesia.
9	Oct 21	Dr. Jeff McElroy, Mendel Biotechnology; Mr. Don Halcomb, and John Halcomb, Walnut Grove Farms – “Miscanthus: A Viable Crop for a KY Grain Farmer?”
10	Oct 28	Discussion of grant proposal project required of all students
11	Nov 4	Dr. Mark Crocker, Associate Director Biofuels & Environmental Catalysis Center for Applied Energy Research, University of Kentucky : Biomass Conversion To Biofuels: Thermochemical Options
12	Nov 11	Dr. Chad Lee: Corn based biofuels: what are the future prospects?
13	Nov 18	Dr. Ling Yuan: Engineering Novel Enzymes for Production of Biofuels and Bioproducts
14	Nov 25	University Holiday
15	Dec 2	Student presentations
16	Dec 9	Student presentations