TO: The Faculty of the College of Engineering

FROM: Department of Agricultural and Biological Engineering

RE: New Graduate Course, ABE 69400

The faculty of the Department of Agricultural and Biological Engineering has approved the following new course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

ABE 69400 Graduate Research Training
Sem 1, Practice/Study/Observation 1, Cr. 0
Requisites: None
Restrictions: Graduate Standing
Attributes: Pass/Not Pass Only

Description: Strategies for success in graduate study are taught. Students will learn how to write a graduate research proposal, effectively plan for degree milestones, and learn about benefits of participating in professional societies. Students will also complete required training for graduate student researchers, including responsible conduct of research, laboratory safety, and an equal access/equal opportunity briefing.

Reason: The proposed content is currently taught as part of an existing course, ABE 69700. Concurrently, we are proposing changes to that course. Currently ABE 69700, titled "Seminar," includes a fall version (taken by all new graduate students) and a spring version (taken by doctoral students only in their second or third year). In order to clarify course content and add content/credits to ABE 69700 (spring), we are proposing that the material currently taught during the fall semester be moved to this new course, ABE 69400. This course will prepare graduate students to succeed in their graduate degree in both academic matters (how to write a research proposal) and practical/technical matters (laboratory safety, program deadlines). The change to Practice/Study/Observation brings the course into compliance with University Policy for 0 credit courses.

Bernard A. Engel
Agricultural and Biological Engineering Department

APPROVED FOR THE FACULTY
OF THE SCHOOLS OF ENGINEERING
BY THE ENGINEERING
CURRICULUM COMMITTEE
ECC Minutes 1/11/13
Date 1/18/13
Chairman ECC

ABE 69400

0

Office of the Registrar
FORM 40G REV. 10/10

PURDUE UNIVERSITY

REQUEST FOR ADDITION, EXPIRATION, OR REVISION OF A GRADUATE COURSE
(50000-60000 LEVEL)

Print Form

EFD 2-13

Graduate Council Doc. No. 12-29b

DEPARTMENT Agricultural and Biological Engineering

EFFECTIVE SESSION Fall 2013 201420

INSTRUCTIONS: Please check the items below which describe the purpose of this request.

- [X] 1. New course with supporting documents (complete proposal form)
- [ ] 2. Add existing course offered at another campus
- [ ] 3. Expiration of a course
- [ ] 4. Change in course number
- [ ] 5. Change in course title
- [ ] 6. Change in course credit/type
- [ ] 7. Change in course attributes
- [ ] 8. Change in instructional hours
- [ ] 9. Change in course description
- [ ] 10. Change in course requisites
- [ ] 11. Change in semesters offered
- [ ] 12. Transfer from one department to another

PROPOSED:		EXISTING:	
Subject Abbreviation	ABE	Subject Abbreviation	
Course Number	69400	Course Number	
Long Title	Graduate Research Training		
Short Title	Graduate Research Training		

Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY)

TERMS OFFERED
Check All That Apply:
[X] Fall [ ] Spring [ ] Summer

CAMPUS(ES) INVOLVED
[ ] Calumet [ ] N. Central
[ ] Cont Ed [ ] Tech Statewide
[ ] Ft. Wayne [X] W. Lafayette
[ ] Indianapolis

CREDIT TYPE
1. Fixed Credit: Cr. Hrs. 0
2. Variable Credit Range: Minimum Cr. Hrs ____ (Check One) To [ ] Or [ ]
Maximum Cr. Hrs. ____
3. Equivalent Credit: Yes [ ] No [X]
4. Thesis Credit: Yes [ ] No [X]

COURSE ATTRIBUTES: Check All That Apply
1. Pass/Not Pass Only [ ]
2. Satisfactory/Unsatisfactory Only [✓]
3. Repeatable [ ]
Maximum Repeatable Credit: [ ]
4. Credit by Examination [ ]
5. Special Fees [ ]
6. Registration Approval Type Department [ ] Instructor [ ]
7. Variable Title [ ]
8. Honors [ ]
9. Full Time Privilege [ ]
10. Off Campus Experience [ ]

Schedule Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated
Lecture	50	1	16	100%
Recitation				
Presentation				
Laboratory				
Lab Prep				
Studio				
Distance				
Clinic				
Experiential				
Research				
Ind. Study				
Pract/Observ	50	1	16	100

Cross-Listed Courses

RECEIVED
OCT 22 2013
OFFICE OF THE REGISTRAR

COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):

Strategies for success in graduate study are taught. Students will learn how to write a graduate research proposal, effectively plan for degree milestones, and learn about benefits of participating in professional societies. Students will also complete required training for graduate student researchers, including responsible conduct of research, laboratory safety, and an equal access/equal opportunity briefing. Professor Chaubey.

Calumet Department Head	Date	Calumet School Dean	Date	Calumet Undergrad Curriculum Committee	Date
Fort Wayne Department Head	Date	Fort Wayne School Dean	Date	Fort Wayne Chancellor	Date
Indianapolis Department Head	Date	Indianapolis School Dean	Date	Undergrad Curriculum Committee	Date
North Central Department Head	Date	North Central School Dean	Date	Date Approved by Graduate Council	
Bernie Engel / I Chaubey	12/18/12	A.D. Fentiman	1/30/13 12.19.12	APPROVED 10/17/13	
West Lafayette Department Head	Date	West Lafayette College/School Dean	Date	Graduate Council Secretary	Date 10/18/13
Graduate Area Committee Convener	10/17/13 Date	Graduate Dean	Date	West Lafayette Registrar	Date 10/4/13

OFFICE OF THE REGISTRAR

LIAM 11/1/13

EFD 2-13
ABE 69400

Supporting Document for a New Graduate Course

To: Purdue University Graduate Council

From:
Faculty Member: Indrajeet Chaubey
Department: Agricultural and Biological Engineering
Campus: West Lafayette

Date:

Subject: Proposal for New Graduate Course-Documentation Required by the Graduate Council to Accompany Registrar's Form 40G

For Reviewer's comments only (Select One)

Reviewer:

Comments:

Contact for information if questions arise:
Name: Charlie Armstrong
Phone Number: x4-1166
E-mail: ctarmstr@purdue.edu
Campus Address: ABE 201

Course Subject Abbreviation and Number: ABE 69400

Course Title: Graduate Research Training

A. Justification for the Course:

- Provide a complete and detailed explanation of the need for the course (e. g., in the preparation of students, in providing new knowledge/training in one or more topics, in meeting degree requirements, etc.), how the course contributes to existing majors and/or concentrations, and how the course relates to other graduate courses offered by the department, other departments, or interdisciplinary programs.

- Justify the level of the proposed graduate course (50000- or 60000-level) including statements on, but not limited to: (1) the target audience, including the anticipated number of undergraduate and graduate students who will enroll in the course; and (2) the rigor of the course.

B. Learning Outcomes and Method of Evaluation or Assessment:

- Describe the course objectives and student learning outcomes that address the objectives (i.e., knowledge, communication, critical thinking, ethical research, etc.).

- Describe the methods of evaluation or assessment of student learning outcomes. (Include evidence for both direct and indirect methods.)

- Grading criteria (select from dropdown box); include a statement describing the criteria that will be used to assess students and how the final grade will be determined.

Criteria Attendance and Class Participation

- Identify the method(s) of instruction (select from dropdown box) and describe how the methods promote the likely success of the desired student learning outcomes.

Method of Instruction ~~Presentation~~ LEC

C. Prerequisite(s):

- List prerequisite courses by subject abbreviation, number, and title.
- List other prerequisites and/or experiences/background required. If no prerequisites are indicated, provide an explanation for their absence.

D. Course Instructor(s):

- Provide the name, rank, and department/program affiliation of the instructor(s).
- Is the instructor currently a member of the Graduate Faculty? ___ Yes ___ No
  (If the answer is no, indicate when it is expected that a request will be submitted.)

E. Course Outline:

- Provide an outline of topics to be covered and indicate the relative amount of time or emphasis devoted to each topic. If laboratory or field experiences are used to supplement a lecture course, explain the value of the experience(s) to enhance the quality of the course and student learning. For special topics courses, include a sample outline of a course that would be offered under the proposed course.

F. Reading List (including course text):

- A primary reading list or bibliography should be limited to material the students will be required to read in order to successfully complete the course. It should not be a compilation of general reference material.
- A secondary reading list or bibliography should include material students may use as background information.

G. Library Resources

- Describe the library resources that are currently available or the resources needed to support this proposed course.

H. Example of a Course Syllabus (While not a necessary component of this supporting document, an example of a course syllabus is available, for information, by clicking on the link below, which goes to the *Graduate School's Policies and Procedures Manual for Administering Graduate Student Programs*. See Appendix K.)

http://www.gradschool.purdue.edu/downloads/Graduate_School_Policies_and_Procedures_Manual.pdf

ABE 69400 GRADUATE SEMINAR – FALL 2013 SCHEDULE

[Class meeting day/time] [Class meeting location]

Instructor	**Office**	**Email**	**Phone**
Dr. Indrajeet Chaubey	ABE 320	ichaubey@purdue.edu	4-5013

Learning Objectives
After completing this course, you will be able to:

- make use of key resources for graduate study
- employ safe laboratory procedures
- complete milestones for timely progress toward your degree
- maintain a non-threatening environment for you and your colleagues
- conduct research in an ethical manner
- engage effectively in professional development

Week	**Seminar Topic**	**Assignment Due** *(described p.2)*
1	Research areas in ABE	
2	ABE/ECN Computer Resources Orientation	
3	Libraries	
4	Tour Maha	
5	REM (safety) Training	
6	Degree Milestones and Other Important Info	Bring blank POS form, 590 form, and exam rubric printed from ABE current students webpage
7	Degree Milestones and Other Important Info	
8	Equal Access/Equal Opportunity Training	
9	Creating Your Website on the ABE/ECN Computer System	1: Draft plan of study
10	Participating in Professional Societies	
11	No Class (Work on CITI)	
12	No Class (Work on CITI)	
13	Responsible Conduct of Research	2: CITI Certification

	Discussion	
14	How to write a graduate research proposal	
15	How to write and review a scientific paper	
16	Conclusions; What's Next for Graduate Study	3, 4, 5, 6

COURSE REQUIREMENTS:

1. Attend all seminar meetings. If you are unable to attend, email Charlie Armstrong in advance, and attend an additional research presentation or professional development workshop.
2. Complete the assignments listed below, and submit them by the due date.
    - For all assignments submitted through Blackboard, copy and paste into the submittal box rather than attaching a file.
    - For the CITI training, see Assignment Resources below.

ASSIGNMENTS

See Blackboard for more information (instructions, resources) on all assignments.

	Assignment	**Due**
1	*Submit a draft plan of study* This may be incomplete; you may not know at this point every course you will take or every member of your advisory committee. Advisory committee signatures are not needed on this draft of your plan of study.	Week 9
2	*CITI (Collaborative Institutional Training Initiative)*	Week 13
3, 4	*Attend <u>two</u> research seminars anywhere on campus. For each seminar...* Keep a record of: • Title of the presentation • Name and title of presenter • Date of presentation • Write a paragraph about your impressions and what you learned (submit via Blackboard)	Week 16
5, 6	*Attend <u>two</u> professional development workshops anywhere on campus. For each workshop...*	Week 16

	Keep a record of: • Title of the presentation • Name and title of presenter • Date of presentation • Write a paragraph about your impressions and what you learned (submit via Blackboard)	

Emergencies: In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances. Information will be sent through the course email list.

Grading Policy: This course is graded on a Pass/No pass basis. In order to receive a passing grade, you must: (1) attend all the classes; and (2) submit all assignments by the due date. If you need to miss a class for a compelling reason, you may attend an additional seminar or professional development workshop elsewhere on campus (as described above).

ABE 69400

Supplemental Information for Form 40G
Request for addition, expiration, or revision of a graduate course
ABE 69400: Graduate Research Training

A. Justification for the Course
   - Need for the course:
     - This course supports the academic and professional success of our graduate students by providing a forum for (a) ongoing orientation to departmental, college, and university resources for graduate students, (b) completing required training and certification for graduate researchers, (c) explanation of graduate degree requirements, policies, and procedures, (d) discussion of best practices for success in graduate school and beyond. These needs can best be met in a single course required of all new ABE students.
   - Level of the proposed graduate course
     - This course will be a 60000 level course because it will be solely taken by graduate students and will focus on supporting success in graduate study.

B. Learning Outcomes and Method of Evaluation or Assessment
   - Course objectives: Students will...
     - Know and be able to use key resources for success in graduate study.
     - Complete required training for graduate student researchers (e.g., laboratory safety, responsible conduct of research).
     - Identify critical milestones for graduate study, and be aware of resources for understanding and fulfilling requirements (e.g., graduate manual, current student website).
     - Develop a personalized plan for success in and beyond their graduate program.
   - Methods of evaluation
     - Evaluation will be completion-based (e.g., complete responsible conduct of research training via Collaborative Institutional Training Initiative website).
   - Grading criteria
     - Attendance & Class Participation; Homework
     - Course will be graded pass/not pass and will require (a) satisfactory completion of all assignments, (b) attendance at all class meetings or approved make-up work for meetings missed.
   - Method(s) of instruction
     - Practice/observation – This method promotes likely success in student learning outcomes by allowing necessary information (which is straight-forward) to be conveyed to the students and applied, via practice, with instructor observation, to their individual experiences and academic/career goals.

C. Prerequisite(s): Graduate standing

D. Course Instructor:

- Indrajeet Chaubey, Associate Professor, Agricultural and Biological Engineering
- Is the instructor currently a member of the graduate faculty? YES

E. Course Outline (one 50-minute meeting each except as noted) ←
- Orientation to the research areas in Agricultural and Biological Engineering
- ABE/ECN Computer Resources
- Libraries resources
- REM (laboratory safety) Training
- Degree Milestones and Other Important Info (2 meetings)
- Equal Access/Equal Opportunity Training (1.5 meetings)
- Creating Your Website on the ABE/ECN Computer System
- How to write a graduate research proposal
- How to write and review a scientific paper
- Participating in Professional Societies
- Responsible Conduct of Research (3 meetings)

F. Reading List:
- Collaborative Institutional Training Initiative Responsible Conduct of Research training modules (www.citiprogram.org)
- ABE graduate student manual (https://engineering.purdue.edu/ABE/Academics/Grad/index.html)

G. Library Resources
- Library resources include those generally available to Purdue graduate students. No specialized library resources are needed to support this course.