APPLICATION FOR NEW COURSE

1. Submitted by College of Agriculture
   Department/Division offering course Entomology
   Date 10-05-2005

2. Proposed designation and Bulletin description of this course
   a. Prefix and Number ENT 636
   b. Title* Insect Molecular Biology
      *NOTE: If the title is longer than 24 characters (including spaces), write
      A sensible title (not exceeding 24 characters) for use on transcripts
   c. Lecture/Discussion hours per week 2
   d. Laboratory hours per week 4
   e. Studio hours per week
   f. Credits 4
   g. Course description
   h. Prerequisites (if any)
      ENT/BIO635 or consent of instructor
   i. May be repeated to a maximum of (if applicable)

4. To be cross-listed as
   BIO 636
   Prefix and Number
   Signature, Chairman, cross-listing department

5. Effective Date Spring, 2007 (semester and year)

6. Course to be offered
   □ Fall  ☑ Spring  □ Summer

7. Will the course be offered each year?
   (Explain if not annually)
   The course will be offered alternate years. This is a graduate course, we do not anticipate having enough students to offer each year
   □ Yes  ☑ No

8. Why is this course needed?
   This course is needed to teach latest developments in insect molecular biology to graduate students in entomology and biology.
   Many entomology departments around the country have insect molecular biology course in their graduate curriculum.

9. a. By whom will the course be taught? Reddy Palli and Bruce Webb
   b. Are facilities for teaching the course now available?
      If not, what plans have been made for providing them?
      ☑ Yes  □ No
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10. What enrollment may be reasonably anticipated?  

11. Will this course serve students in the Department primarily?  
   Will it be of service to a significant number of students outside the Department?  
   If so, explain.  
   ☒ Yes ☐ No  
   ☐ Yes ☒ No

Will the course serve as a University Studies Program course?  
   ☐ Yes ☒ No

If yes, under what Area?  

12. Check the category most applicable to this course  
   ☐ traditional; offered in corresponding departments elsewhere;  
   ☒ relatively new, now being widely established  
   ☐ not yet to be found in many (or any) other universities

13. Is this course applicable to the requirements for at least one degree or certificate at the University of Kentucky?  
   ☒ Yes ☐ No

14. Is this course part of a proposed new program:  
   If yes, which?  
   ☐ Yes ☒ No

15. Will adding this course change the degree requirements in one or more programs?*  
   If yes, explain the change(s) below  
   ☐ Yes ☒ No

16. Attach a list of the major teaching objectives of the proposed course and outline and/or reference list to be used.

17. If the course is a 100-200 level course, please submit evidence (e.g., correspondence) that the Community College System has been consulted.  ☐ Check here if 100-200.

18. If the course is 400G or 500 level, include syllabi or course statement showing differentiation for undergraduate and graduate students in assignments, grading criteria, and grading scales.  ☐ Check here if 400G-500.

19. Within the Department, who should be contacted for further information about the proposed course?  
   Name    Reddy Palli and Bruce Webb  
   Phone Extension  7-4962 and 7-7415

*NOTE: Approval of this course will constitute approval of the program change unless other program modifications are proposed.
APPLICATION FOR NEW COURSE

Signatures of Approval:

John J. Obaydah
Department Chair
Dean of the College

Nov 7, 2005
Date
2/24/2006
Date
2/6/2006
Date of Notice to the Faculty

*Undergraduate Council

*University Studies

*Graduate Council

*Academic Council for the Medical Center

*Senate Council (Chair)

*If applicable, as provided by the Rules of the University Senate

Date of Notice to University Senate

ACTION OTHER THAN APPROVAL

Rev 3/04
Insect Molecular Biology
ENT 636/BIO636 4 credits
Spring 2007

Lectures (2 hr): MW 11-11:50AM
Laboratory (4 hr): M 1-5PM
Instructors: Dr. S.R. Palli, Dr. Bruce Webb, Department of Entomology
  Offices: Ag Science Center North S-225E
Office Hours: By appointment
Telephones: 859-257-4962 (Palli), 859 257 7415 (Webb)
E-mails: rpalli@uky.edu and bwebb@uky.edu

Text: None. Readings will be assigned from the primary literature.

Objectives: Upon completion of this course, the student will
  • be able to discuss central themes in Insect Molecular Biology
  • know the vocabulary and intellectual framework of Insect Molecular Biology
  • have a hands-on working knowledge of the techniques used in Insect Molecular Biology.

Prerequisites: ENT635/BIO635 or consent of instructor

Attendance: Attendance at all class meetings is required. Exams will be based on
material presented in class. See below for University regulations on excusable absences.

Reading Assignments and Discussion: Readings will be assigned on each topic. You
are required to read all assigned papers before the discussion session. Discussion
sessions will be held on Wednesdays. One student per week will be assigned to lead the
discussion. Discussion participation will contribute to your final grade in the class.

Laboratory: Student will perform independent project using some of the latest
techniques in molecular biology. Instructors will provide guidance in performing
research, analyzing results and preparing manuscripts. Final version of the manuscript
will be graded and constitutes 75% of laboratory grade. Manuscripts will be evaluated on
(a) literature review; (b) description of materials and methods used; (c) analysis,
interpretation and presentation of data; (d) discussion of your results in light of the data
within the filed; (e) and display and description figures. You are required to present your
project to the class. Your presentation will be evaluated by the instructors and constitutes
25% of laboratory grade.
Grading: There will be two exams in the class (midterm and final). Each exam will be worth 100 points.

Potential points:
- Midterm Exam (1st class meeting of week 8) 100
- Final Exam 100
- Discussion and participation 100
- Laboratory 600
- Total: 900

Discussion and participation points will be based on your performance in leading the discussion and participation while someone else is leading the discussion. 33% of the points will be based on peer evaluation and 33% of points will be based on instructor evaluation. The rest of the 33% of points will be awarded based on your attendance at the class meetings and general performance in the class.

Grades will then be awarded based on the following scale:
- 90% or greater – A
- 80% to 89.9% – B
- 70% to 79.9% – C
- Less than 70% – F

If grades are lower than we consider appropriate, we may impose a curve that results in higher grades. However, we will not impose a curve that results in lower grades than students earn using the scale indicated above.

Missed Exams or Late Assignments: Make-up exams will be given or late assignments accepted only if an absence is excused based on the University regulations given below. An unexcused absence will result in a zero for that exam or project.

5.2.4.2 Excused Absences: (US: 11/11/85; 2/9/87)
The following are defined as excused absences:

A. Illness of the student or serious illness of a member of the student's immediate family. The instructor shall have the right to request appropriate verification.

B. The death of a member of the student's immediate family. The instructor shall have the right to request appropriate verification.

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.
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)

**Cheating:** University regulations are given below.

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.
**Lecture Schedule**: This schedule is flexible; we may get ahead of or behind this schedule at any time.

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<tr>
<th>Week</th>
<th>Lecture Topic</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>1</td>
<td>DNA and its analysis</td>
<td>Palli</td>
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<tr>
<td>2</td>
<td>Genomics</td>
<td>Webb</td>
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<td>3</td>
<td>RNA and its analysis</td>
<td>Palli</td>
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<td>4</td>
<td>Transcriptome analysis: microarrays and RNAi</td>
<td>Palli</td>
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<td>5</td>
<td>Proteins and their analysis, Proteomics</td>
<td>Palli</td>
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<td>6</td>
<td>Bioinformatics</td>
<td>Palli</td>
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<td>7</td>
<td>Molecular analysis of insect development</td>
<td>Palli</td>
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<td>8</td>
<td>Molecular analysis of insect reproduction</td>
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<td>9</td>
<td>Molecular analysis of insect behavior</td>
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<td>10</td>
<td>Molecular analysis of insect immunity</td>
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<td>11</td>
<td>Genetic modification of biological control agents</td>
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<td>12</td>
<td>Transgenic insects</td>
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<td>13</td>
<td>Pest-tolerant genetically modified crops</td>
<td>Webb</td>
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<tr>
<td>14</td>
<td>Molecular basis of insecticide resistance</td>
<td>Palli</td>
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