APPLICATION FOR NEW COURSE

1. Submitted by College of Agriculture
   Department/Division offering course Plant Pathology Department

2. Proposed designation and Bulletin description of this course
   a. Prefix and Number PPA 671
   b. Title* Advanced Plant Virology
      *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 1
   d. Laboratory hours per week 0
   e. Studio hours per week 0
   f. Credits 1
   g. Course description
      Molecular basis of plant virus infection of plants. Virus replication and spread. Virus control strategies.
   h. Prerequisites (if any)
      PPA 400G, PPA 500, PPA 600.
   i. May be repeated to a maximum of N/A (if applicable)

4. To be cross-listed as N/A
   Prefix and Number
   Signature, Chairman, cross-listing department

5. Effective Date Fall 2006
   (semester and year)

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

7. Will the course be offered each year? ✓ Yes □ No
   (Explain if not annually)
   N/A

8. Why is this course needed?
   Plant viruses are major sources of disease, and knowledge of the mechanisms of viral pathogenesis is needed to combat such diseases.

9. a. By whom will the course be taught? Peter Nagy and Michael Goodin
   b. Are facilities for teaching the course now available? ✓ Yes □ No
      If not, what plans have been made for providing them?
      N/A
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10. What enrollment may be reasonably anticipated? 5

11. Will this course serve students in the Department primarily? ✓ Yes   □ No
    Will it be of service to a significant number of students outside the Department? □ Yes   ✓ No
    If so, explain.
    N/A

12. Will the course serve as a University Studies Program course? □ Yes   ✓ No
    If yes, under what Area? No

13. 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

14. Is this course applicable to the requirements for at least one degree or certificate at the University of Kentucky? □ Yes   ✓ No

15. Is this course part of a proposed new program:
    If yes, which?

16. Will adding this course change the degree requirements in one or more programs?*
    If yes, explain the change(s) below
    N/A

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

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

19. 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.

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

Name  Peter Nagy                             Phone Extension  257-7445x80726
APPLICATION FOR NEW COURSE

Signatures of Approval:

David A. Smith
Department Chair

Dean of the College

4/22/05
Date

4/26/05
Date

4/27/05
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
PPA 671: Advanced Plant Virology
Semesters taught: Every fall.
Credit hours: 1
Prerequisites: PPA 400G, PPA 500, PPA 600
Requirement: Option to fulfill the requirement for two courses in Advanced Plant Pathology
Organizer and Instructor: Peter Nagy and Michael Goodin

Topics:
Lecturer: Peter Nagy
1. Introduction/Positive-stranded RNA viruses.
2. Virus entry/ gene expression/translation
3. RNA replication I
4. RNA replication II-overview Defective and satellite RNAs.
5. Early events in virus infections Student presentation (1-2)
7. Encapsidation/virus structure
Lecturer: Michael Goodin
8. Virus intracellular movement
9. Virus cell-to-cell and long-distance movement
10. Plant viroids/ minus and dsRNA viruses
11. Plant DNA viruses
12. Virus suppressions of antiviral defences
13. Viruses as molecular tools for genetic engineering (student presentation 2)
14. Virus Control Strategies
15. Final exam

• Assignments, Exams and Grades:
Participation: 40 pts
Midterm exam: 30 pts
Final exam: 30 pts
Grades
• 90-100%: A
• 80-89%: B
• 70-79%: C
• <70%: E