Southeast Missouri State University

Department of: Agriculture  Course Number: AO 323

Title of Course: Plant Pathology  Proposed: 9/98

I. Catalog Description and Credit Hours of Course:

Microbiological principles and cultural practices associated with diseases in plant production. Two lectures. II. (2).

II. Prerequisites: BI200

III. Purposes or Objectives of the Course:

A. To become familiar with the basic principles involving fungal, bacterial, viral, and nematode based diseases in plants.
B. To gain a knowledge of the environmental factors influencing plant diseases.
C. To gain an understanding of the influence of plant pathogens in crop-ecology.
D. To become familiar with the classification of plant protection chemicals.
E. To become familiar with the principles of an integrated approach to plant disease management.

IV. Expectations of Students:

A. Evidence of study outside of lectures as revealed by examinations.
B. Active classroom participation.
C. Completion of all written assignments.
D. All writing assignments will conform to the style guide of the American Society of Agronomy.
E. Study groups will maintain throughout the semester a plant pathogen portfolio detailing the pathogen’s symptoms, environmental constraints, lifecycle and ecology, and control methods.
F. Students will demonstrate the integration of control measures by producing a series of written integrated management plans for selected crops.
G. Students will be expected to prepare organized and technically correct professional presentations using available multimedia techniques.

V. Course Content:

A. Lecture content.

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<th>Hours</th>
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<tbody>
<tr>
<td>1</td>
<td>Parasitism and disease development.</td>
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<td>2</td>
<td>How pathogens attack plants.</td>
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<td>3</td>
<td>Effects of pathogens on plant physiological functions.</td>
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<td>4</td>
<td>Plant defenses.</td>
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<td>5</td>
<td>Genetics of plant diseases.</td>
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<td>6</td>
<td>Environmental effects on infectious plant disease.</td>
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</table>
7. Examination #1  
8. Control of plant diseases.  
10. Plant diseases caused by fungi.*  
11. Examination #2  
12. Plant diseases caused by prokaryotes.*  
13. Plant diseases caused by viruses.*  
14. Plant diseases caused by nematodes.*  
15. Examination #3  

*Student presentations

VI. Textbook

[ISBN 0-12-044564-6].

VII. Student Evaluation:

A. Hour Exams (3)  
B. Final Examination  
C. Portfolio  
D. Management plans  
E. Presentations  

300 points  
100 points  
50 points  
100 points  
50 points  

600 points

Grading scale:  
91<A<100;  
81<B<90;  
71<C<80;  
61<D<70;  
F<61