

**UNIVERSITY OF PUERTO RICO
MAYAGÜEZ CAMPUS
COLLEGE OF AGRICULTURAL SCIENCES
DEPARTMENT OF CROP PROTECTION**

COURSE SYLLABUS*

Course Number: PROC 5005
Course Title:: Plant Pathogenic Fungi
Lecture Hours: 32
Lab. Hours: 48

Course Description:

The study of fungi emphasizing those of importance as plant pathogens. Each group will be studied considering its taxonomy, nomenclature, morphology, genetics and host-parasite relationships. A collection with field notes will be required.

Prerequisites : Botany BIOL 3435

Textbook, supplies and other resources:

Text:

Plant Pathology, 1997. George Agrios, 4^{ta}. Ed. Academic Press. New York, 635 pp

Other References:

Illustrated Genera of Imperfect Fungi. 1987. H.L. Barnett y B.B. Hunter. MacMillan Publishing Co., New York.

Introductory Mycology: 1997. Alexopoulos, C.J., C.W. Mims and M. Blackwell. 4^{ta} Ed. J. Wiley & Sons. New York.

Dictionary of Fungi. 1983. Ainsworth & Bisby. 7^{ma} Ed. Commonwealth Mycological Institute. Kew, Surrey

Fungi on Plants and Plant Products in the United States. 1995. Farr, Bills, Chamuris and Rossman. APS Press. Minnesota.

Journals:

Phytopathology - Published monthly by the American Phytopathological Society, APS Press, Minn.

Plant Disease - Published monthly by the American Phytopathological Society, APS Press, Minn.

Mycologia - Published monthly by the Mycological Society of America, The New York Botanical Garden, Bronx, New York

The Journal of Agriculture of the University of Puerto Rico. Published by the A.E.S. of the University of Puerto Rico, Río Piedras, Puerto Rico.

Purpose

This course is preparatory work in completing a bachelor or masters degree in the Department of Crop Protection or related discipline of the College of Agricultural Sciences. This course will focus on the taxonomy, nomenclature, morphology, genetics and host-parasite relationships in order to learn fungal classification. The students will learn about symptomatology, life cycles and control of plant pathogenic fungi.

Course goals

After completing the course the students should be able to :

Be familiarized with plant pathogenic fungi morphology and classification.

Mention and explain the variety of mechanisms involved in host-parasite relationships .

Describe in detail the symptomatology, life cycles and control of plant pathogenic fungi.

Requirements:

All students are expected to complete all lessons. Attain specific competencies as indicated in the course syllabus. Do all course work. Come to class prepared to perform at a C level on all tests.

Come to class all the time and on time. Attend individual conferences with the instructor as necessary.

Laboratory and field work:

General policy: Labs are considered a major part of the course, and all students are expected to participate. Students will be assigned to work 3 hours per day in the laboratory every week. Students will be allowed to leave the lab when work is completed and the work area has been cleaned up. Students will operate lab equipment such as the autoclave under the supervision of the instructor.

Student Behavior: In the lab, students will also be graded on initiative, communication, cooperativeness, teamwork and a positive attitude. In addition students, will come to class in

clean clothing suitable for public appearance. Radio, tapes, cell phones and other audio or video equipment are not permitted in the classroom or lab at any time.

Instructional strategies:

The presentation methods include the following: Instructor activities involving lectures, presentations with overheads or slide projector and demonstrations. Student's activities involving discussions, guided simulations, readings and independent study.

The University of Puerto Rico - Mayagüez Campus general library have available to student's books, journals, electronic resources, videos and slides of plant pathogenic fungi.

Location of campus resources:

The following describes the name, location, hours of operation and services offered at the following campus resources:

Library: Opens 7:30 am to 9:00 pm. Reading rooms, books, journals and other material are available for student use.

Agricultural Computer Center: Annexes to J. T. Piñero Building (AP-101) Open 8:00 to 9:00 pm. PC are available for student use.

Student Center: Third floor Open 8:00 to 4:30 pm. Tutoring is available for a variety of subjects and courses.

Department/Campus Policies:

9a. Class attendance: Class attendance is compulsory. The University of Puerto Rico, Mayagüez Campus, reserves the right to deal at any time with individuals cases of non-attendance. Professors are expected to record the absences of their students. Frequent absences affect final grade, and may even result in total loss of credits. Arranging to make up work missed because of legitimate class absence is the responsibility of the student. (Bulletin of Information Undergraduate Studies, pp. 39, 1995-96).

9b. Absence from examinations: students are required to attend all examinations. If a student is absent from an examination for a justifiable reason acceptable to the professor, he or she will be given a special examination. Otherwise, he or she will receive a grade of 0 or F in the examination missed. (Bulletin of Information Undergraduate Studies, pp. 39, 1995-96).

9c. Final Examinations: Final written examinations must be given in all course unless, in the judgment of the Dean, the nature of the subject makes it impracticable. Final examinations

scheduled by arrangements must be given during examination period prescribe in the Academic Calendar, including Saturdays. (Bulletin of Information Undergraduate Studies, pp. 39, 1995-96).

9d. Partial withdrawals: A student may withdraw from individual courses at any time during the term, but before the deadline established in the university Academic Calendar. (Bulletin of Information Undergraduate Studies, pp. 37, 1995-96).

9e. Complete withdrawals: A student may completely withdraw from the University of Puerto Rico , Mayagüez Campus, at any time up to the last day of classes. (Bulletin of Information Undergraduate Studies, pp. 37, 1995-96).

9f. Disabilities: All the reasonable accommodations according to the American with Disability Act (ADA) Law will be considered with the Dean of Students and in accordance with the particular needs of the student.

9g. Ethics: Any academic fraud is subject to the disciplinary sanctions described in article 14 and 16 of the revised General Student Bylaws of the University of Puerto Rico contained in certification 018-1997-98 of the Board of Trustees. The professor will follow the norms established in articles 1-5 of the Bylaws.

Campus resources

General Library and Agricultural Computer Center are available to obtain professor's references materials and PCs will be available for student use. University 's Student Center has tutorial programs for student who need extra help.

General topics

The plant pathogenic fungi course will focus on fungal taxonomy, nomenclature, morphology, genetics and host-parasite relationships. The students will learn about symptomatology, life cycles and control of plant pathogenic fungi. Fungal groups will be covered in detail, classification will be as follows.

I. Pseudofungi

Kingdom: Protozoa

Filum: Myxomycetes

Filum: Plasmodiophoromycota

Kingdom: Chromista

Filum: Oomycota

II. True Fungi

Kingdom:Fungi

Filum: Chytridiomycota

Filum: Zygomycota
Filum: Ascomycota
Filum: Basidiomycota
Filum: Deuteromycota

III. Plant Pathogenic Fungi Biotechnology

Revised: December, 1999

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