

COURSE SYLLABUS FOR PATH/PBIO/ANTH 3010 (FUNGI; FRIENDS AND FOES)

The object of this course is to introduce students to the numerous ways that fungi influence their lives. Upon successful completion of the course students should have a good understanding of the basic biology of fungi, their importance in various ecosystems and their and direct and indirect impacts upon human affairs.

Instructor:

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COURSE POLICIES AND GRADING

Grading: 4 lecture exams (100 points each) = 400 points

Grading Scale: 90 - 100 = A

80 - 89 = B

70 - 79 = C

60 - 69 = D

59 & below = F

Note!! Because there is no textbook for this course it is essential for you to attend class regularly. If you miss class be sure and get the notes from someone. Test questions will come not only from the information presented in the overheads used in class but also from additional verbal information presented during lectures.

Makeup Exams: Each student is eligible to take one makeup exam for a missed exam (exam 1, 2 or 3 only). All makeup exams will be given on next to last day of class at the end of the semester. Test 4 will be given during the time scheduled for the final exam for the course. Note: All questions regarding grades on Tests 1, 2 and 3 must be resolved before taking test 4. Also, please keep your graded tests 1-3 in case a question arises regarding your final grade.

Copies of overheads used in class can be downloaded from the website shown below:

<http://www.plant.uga.edu/labrat/fungifriendfoes.htm>

<http://www.plant.uga.edu/labrat/fungi/friend/foes.htm> *All students are responsible for maintaining the highest standards of honesty and integrity in every phase of their academic careers. The penalties for academic dishonesty are severe and ignorance is not an acceptable defense.*

TOPIC OUTLINE

Introduction: course outline, requirements, testing, grading, etc.

Characteristics of fungi and a brief introduction to the major groups of fungi
Importance of fungi in ecosystems and their direct and indirect impacts on humans
Fungi as agents of decay
Ecology of wood rotting fungi and their use in industry and in bioremediation efforts
Historical uses of fungi by humans and the folklore of fungi
Use of hallucinogenic mushrooms in primitive cultures (i. e., ethnomycology)
Introduction to mushrooms and mushroom identification
Poisonous and edible mushrooms
Nutritional and medicinal values of edible mushrooms
Commercial production of edible mushrooms
Fungi as mutualists: mycorrhizae, lichens, endophytes and fungus-insect relationships
Fungi as plant pathogens
The disease cycle and Koch's postulates
Late blight of potato: historical and current perspectives
Downy mildew of grapes and Bordeaux mixture
Ergot of rye and ergotism in humans and animals
Rust and smut fungi and their impacts on crops: historical and current perspectives
Introduced fungal pathogens: Dutch elm disease, chestnut blight, oak decline, karnal bunt, etc.
Southern leaf blight of corn and the hazards of monoculture
Control of fungal diseases of plants; introduction to fungicides and ecological concerns
Transgenic plants and disease resistance
Post-harvest diseases and an introduction to mycotoxins
Mycotoxins: historical and current perspectives
Fungi as biological control agents
Fungi as sources of antibiotics and the problem of antibiotic resistance
Biopharmaceutins of fungal origin
Fungi as human pathogens: introduction to medical mycology
Ringworm diseases, subcutaneous/systematic infections, yeast infections, fungi and AIDS, etc.
Fungi and allergies: fungi and sick building syndrome
Introduction to fermentation: baking and brewing
Beer and wine making
Mushroom tea: fact versus fiction
Use of fungi in the production of meat substitutes
Fungi and cheese making
Fungi as experimental organisms
Industrially important fungi