3. Course Syllabus, Schedule, Delivery Mode

Synopsis: This course provides an introduction to the fungi with emphasis on their biology, ecology, genetics and interactions with other organisms, including humans and their crops. Emphasis is on the true fungi, including yeasts, with brief treatment of other fungus-like microbes of the Kingdoms Chromista and Amoebozoa.

Description:

The biological world can be divided up into producers (e.g., plants), consumers (e.g., animals) and decomposers (e.g., fungi). While this is very much an oversimplification it does convey a sense of the importance of fungi. Fungi are extremely important in many ways - think of food (bread, wine, cheese), magnificent forests (trees and many other plants need fungi to survive), of drugs such as penicillin or cyclosporine, of diseases of plants such as blights, mildews, rusts and smuts or diseases of animals such as ringworm, athlete's foot, thrush, and deadly systemic mycoses. Then remember all those hidden species so busily decomposing dead material. In this course we will be emphasizing not just the different types of fungi but exploring their impact on humans and the ecology of the world we live in.

Learning Outcomes:

At the end of this course, successful students will be able to:

1. Describe and differentiate the major groups of fungi and fungus-like organisms by recognizing, describing, and illustrating their characteristic features and life cycles.
2. Describe the major ecological roles and economic value, including industrial uses, of different fungi and fungus-like organisms.
3. Describe and differentiate various types of symbioses between fungi and other organisms, including plants, microbes, animals, and other fungi, and explain their ecological and economic importance.
4. Perform culturing and microscopy to detect, enumerate and identify fungi, including fungal spores in building air and fungi on/in plants or plant products.

Objectives

Become familiar with: the major kinds of fungi and fungus-like organisms, their names, their features, and their importance; how fungi live - their basic biology, physiology, and genetics; some of the most important activities of fungi in nature - symbioses (good &ETQ[(D)-6(e)7(s)-6(W* u6[(-)] TJETQq0.0000s)-6(a)7(

Course Calendar [Note: We may not stay on schedule!]

LECTURES See schedule posted on OWL

Week	Dates	Subject material
1		Lectures 1-2, Logistics, Introduction [Classes begin Jan 8]
2		Lectures 3-4, "Basal Fungi"
3		Lectures 5-6, "Zygomycota", Glomeromycota, Mycorrhizae
4		Lectures 7-8, Ascomycota, moulds and yeasts
5		Lectures 9-10, Medically important fungi and Lichens
6		**Midterm [in class time: ROOM TBA]**
X	Feb 17-25	**No Classes: Reading Week**
7		Lectures 11-12, Basidiomycota [Makeup midterm 6:00 pm 27 Feb]
8		Lectures 13-14, Mushroom poisoning, fungal ecology
9		Lectures 15-16, Fungal ecology II, dispersal
10		Lectures 17-18, Fungal physiology
11		Lectures 19-20, Plant pathology (Intro to 4218)
12		