

BIOM 423/BIOM 523

By Cathy Cripps



BIOM 423 - Mycology and BIOE 424 – Ecology of Fungi are offered in Fall on alternate years: even years for Mycology (BIOM 423 listed under Microbiology) and odd years for Ecology of Fungi (BIOE 424 listed under Ecology).

Sometimes the classes are hard to find on the MSU website but you can always search under Cathy Cripps as Instructor. Classes are limited to around 15 students and fill up early so if you want to take one of these courses, it is best to sign up early. Either course can be taken first as one focuses on the

ecology of fungi and one on the taxonomic groups. I have had many students take both courses to gain a better understanding of fungi. The courses are intended for advanced undergraduates (juniors and seniors) and graduate students although post docs and researchers have attended sections of the course. Each course consists of two lectures per week followed by a two hour lab, although we often stay around to play with fungi after the official lab period ends. Each course has two field trips to nearby habitats. These courses are electives for Plant Biotechnology, Microbial Biotechnology, Plant Pathology, Horticulture, Plant Biology, Organismal Biology, Ecology, Biochemistry, Bioengineering, Microbiology, and some LRES programs.

Introductory Mycology (BIOM 423/BIOM 523) is an important course for students in Plant Pathology, Horticulture, Organismal Biology, Plant Biology and Microbiology. In this course, we go through all the major groups of fungi by phylum, class, order, and genus, learning fungal terminology and structures as we go; students should come away with an ability to “understand myco-speak”. There has been a misunderstanding that this is a course on ‘Mushroom Identification’ which is not the case. The first part of the course does cover the Basidiomycota and there is an extended section on mushroom classification backed up by field trips for collecting, but that is only one part of the course. The next section covers the ‘molds’, primarily the Zygomycota and the asexual forms of Ascomycota. This is essential for budding plant pathologists since over 60% of plant disease is caused by fungi. Here students learn the basics which can be followed up by one of our courses in Plant Pathology. The sexual stages of Ascomycota (morels, cup fungi, Pyrenomycete pathogens) and the Chytridiomycota (water molds) are also covered. If there is time, the slime molds (primarily Myxomycota) are examined. After each lecture on a group of fungi, organisms are displayed in lab to aid in ‘hands-on’ learning which is essential for relating real specimens to textbook figures. A small collection of mushrooms and molds is also required in addition to three lecture and lab exams and several pre-announced identification quizzes.