Mycology

BIOL 415C (CRN 20363) - Spring 2017

Course Outline

Instructor: **Dr. Paul de la Bastide**
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Class time: Tuesday, Wednesday & Friday 11:30 – 12:20 pm. Classes start Wednesday January 4th and end Tuesday April 4th

Location: Clearihue (CLE) A302

Pre-requisites: BIOL 215, BIOL 225, and BIOL 230

What is the course about?

The course is designed to give you a better understanding of how various fungi are related to one another, what we have learned about evolution by the consideration of fungal genetics, the importance of fungi to industrial processes and human activities, and to give you a deeper appreciation for the importance of fungi in natural systems. We will begin with a series of lectures introducing you to the different groups of fungi, how they differ in their life strategies and how we can trace the evolution of extant species using molecular approaches. We will then move on to a consideration of fungal genetics, the evolution of sexual processes in fungi and some of the uniquely fungal biochemical processes.

We will finish the course with an exploration of current research topics in mycology of general interest to the class. This will include individual presentations by students on a current topic, as well as a written critique of published mycological research.

Textbook: There is no official text book for the course, although there will be assigned readings from the primary literature.

Lecture outlines will be posted on CourseSpaces for you. I recommend that you bring the outline to class to add comments during lectures. The primary source of course information will be provided through the lecture material, as well as some assigned readings.

Lecture Topics (including but not limited to the following)

Introduction to Fungi

Classification old and new

The Chytridiomycota

The Neocallimastigomycota, Blastocladiomycota and Microsporidia

The phylum formerly known as the Zygomycota

The Ascomycota

The Basidiomycota (three parts)

Fungal Genetics

Fungal Mating Type genes

Fungal Gene Expression

Forest pathogenic fungi - DED

Mycorrhizal Fungi

Mycotoxins and Hallucinogens

Fungal Ecology

Truffle fungi (Guest Lecturer – to be confirmed)

Biological Control using Fungi

Fungal genomes and gene annotation

Mitochondrial genetics of fungi

The use of molecular approaches to identify fungal species (Guest lecturer)

Evaluation:

Midterm	35 points	in class on February 24th
Individual Written Scientific Critique	15 points	
Individual Seminar Presentation	5 points	
Final exam	45 points	scheduled by registrar

No electronic devices of any kind will be permitted during the exams.

If you cannot attend the mid-term exam for a valid reason (illness, accident, family crisis), it is your responsibility to inform me as soon as possible and provide suitable documentation (doctor's note or counselor's note). No supplemental mid-term exams will be offered.

You are eligible to write deferred final exam if you have a valid reason for missing the final exam.

General regulations:

Grading system:　　　Percentages converted to letter grades

A+ 90.0-100　A 85.0-89.9　A- 80.0-84.9
B+ 77.0-79.9　B 73.0-76.9　B- 70.0-72.9
C+ 65.0-69.9　C 60.0-64.9　D 50.0-59.9　F 0-49.9

Failure to complete at least 70 points of coursework (either midterm and final or all assignments and final) will result in a grade of "N". An N is a failing grade, and it factors into a student's GPA as O. The maximum percentage that can accompany an N on a student's transcript is 49.

Please read the appropriate section of the current UVic Academic Calendar regarding your rights and obligations.

It is your responsibility to be aware of ADD/DROP dates published in the Calendar.

You are expected to observe UVic standards of scholarly integrity especially with regards to plagiarism and cheating.

UVic is committed to promoting, providing and protecting a supportive and safe learning and working environment for all of its members.