

General Mycology IB471 Syllabus (4 credit hours)

Welcome to IB 471, General Mycology. This course provides an introduction to the various groups of fungi, their morphology, biological activities, life histories and economic importance. Since fungal taxonomy based on newly discovered phylogenetic relationships changes rapidly, the current classifications of the different groups of fungi will be discussed, but not overly emphasized during this course. This course contains two lectures and two advanced labs that run back-to-back twice a week. As previous students have stated, this course will definitely change the way you view fungi!

Course Information

Instructor

Dr. Andrew Miller, Illinois Natural History Survey, Robert A. Evers Laboratory (Room 2003), office hours by appointment. (amiller7@illinois.edu); Lab webpage: <http://www.inhs.illinois.edu/research/pi/amiller>

Teaching Assistant

Dan Raudabaugh, Department of Plant Biology (raudaba2@illinois.edu), office hours by appointment

Time and Location

Mondays and Wednesdays, 1pm–4pm

Lecture & Laboratory - Room 4072, Natural History Building

Prerequisite: [IB 150](#) and [MCB 150](#); [IB 302](#) recommended; or consent of instructor. In reality, no prerequisite is required, other than your willingness to learn more about fungi and systematics.

Major Student Learning Outcomes:

By the end of the course, you should be able to:

- 1) Possess significant knowledge of the principles and methods of fungal systematics
- 2) Recognize the most important fungal groups and their phylogenetic relationships
- 3) Understand how to use fungal scientific names correctly
- 4) Apply your knowledge of fungal characters to effectively identify unknown fungi to family, genus and species
- 5) Work collaboratively to carry out the process of scientific inquiry

Textbooks

Text 1 (required): B. Kendrick. 2001. *The Fifth Kingdom (3rd Ed.)*, Focus Publishing, Newburyport, MA. (<http://www.mycolog.com/fifthtoc.html>)

Text 2 (recommended) Alexopoulos, Mims and Blackwell. 1996. *Introductory Mycology (4th Ed.)*, John Wiley & Sons, NY.

Moodle

Moodle is our course management system and its access is limited to students and staff associated with IB 471. To learn more about Learn@Illinois Moodle Service or to contact a Teaching & Learning with Technology (ATLAS-TLT) consultant, send an email to atlastlt@illinois.edu.

Website

<http://www.life.uiuc.edu/ib/471/>

The IB 471 web site is organized into the Home Page and Syllabus. If you click on **Syllabus**, you will see: 1. lecture outlines, 2. PowerPoint lecture presentations, 3. laboratory exercises, 4. additional

reading as PDFs, and 5. image galleries. If you click on any of these, you will be prompted for a name and password. After entering "ib471" for the name and "Fungi2018" for the password, you will be able to download these files and view images.

Academic Integrity

According to the Student Code, "It is the responsibility of each student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions." Please know that it is my responsibility as an instructor to uphold the academic integrity policy of the University, which can be found here:

http://studentcode.illinois.edu/article1_part4_1-401.html

Disability Accommodations

To ensure that disability-related concerns are properly addressed from the beginning, students with disabilities who require assistance to participate in this class are asked to see Dr. Miller as soon as possible. If you have disability needs, schedule a confidential appointment with Dr. Miller at the start of the semester. Please don't wait until the final exam is upon us to express your needs.

Grading

Grades will be assessed based on performance on quizzes and exams in the lecture section and a collection, lab projects and presentations in the lab section as follows:

Lecture

Quizzes (10 points each (200 points total); 25% of final grade)

There will be 23 quizzes given during this course with the top 20 counted towards your final grade. Quizzes will be given during the first 10 minutes of lecture so don't be late! There will be no opportunities to make up quizzes or any additional time given for showing up late so please do not ask.

Exams (100 points each (300 points total); 37.5% of final grade)

There will be three exams given during this course: Exam 1, Exam 2 and a Final Exam. The Final Exam is cumulative and will cover all lecture and lab material presented during this course. The Final Exam will be optional for those students with a 94% or above average at the end of the course.

Lab

Collection (150 points; 18.75% of final grade)

All students will be required to turn in a collection of 25 fungal specimens and 5 cultures from the various groups (see handout).

Lab projects (10 points each (100 points total); 12.5% of final grade)

There will be 10 lab projects that will be graded throughout this course.

Presentations (25 points each (50 points total); 6.25% of final grade)

There will be 2 presentations given by students during this course, one on the families of Agaricomycetidae and one on Human Pathogens.

FINAL GRADES

TOTAL POINTS	PERCENTAGE	GRADE
720-800	90-100%	A
640-719	80-89%	B
560-639	70-79%	C
480-559	60-69%	D
below 480	below 60%	F

The +/- grading system will be used sparingly, with only the highest and lowest points in the range receiving these partial grades.

While it may seem that there are many separate components in your final grade calculation, this is not the case! The course is fully integrative, with material learned in lecture reinforced in lab and vice versa. Lecture activities, lecture assignments and assessment quizzes are all designed to help you learn the material, and you can expect to see many of the very same questions on both lecture and lab exams. The terminology introduced at the start of the course may be bewildering to some, but these same terms are used throughout the course so by its end you're a pro in using basic mycological terminology! Objectives are presented for all lectures in the Lecture Outlines and if you can address those objectives, you will know all that you need to know to do well in the course!

Attendance

Attendance will not be taken, but should be considered mandatory for both lecture and laboratory sections of this course to completely understand all concepts and take advantage of all opportunities for hands-on instruction. Attendance will be reflected through your scores on quizzes, which will be given at the start of nearly every lecture. Common courtesy suggests that if you plan to miss a lecture or lab, you notify the instructors beforehand. It is not possible to make up a presentation or a missed lab. If you miss a lab, be sure to contact the TA.

Conflicts, Make-Up Exams and Absences

Make-up lecture exams are generally not given except under exceptional circumstances, such as a major injury, serious illness, or death in the immediate family. Other circumstances may also warrant a make-up exam, such as religious beliefs and observances or formal participation in scheduled activities of officially recognized groups, such as athletic teams.

If you have a conflict with any scheduled lecture exam this semester, the university requires that you inform your instructor as soon as possible, but no later than one week before the date of the scheduled exam. Additional information on class attendance, notifications, and absence letters is available in the Student Code (http://studentcode.illinois.edu/article1_part5_1-501.html) and I will abide by these guidelines, so I ask that you become familiar with them. If you miss or plan to miss a lecture exam, provide Dr. Miller with a written statement as soon as possible explaining the reason for the absence and supply supporting evidence. If health related, a note from your health care provider, McKinley Health Center, or the Student Assistance Center in the Office of the Dean of Students is required. If the explanation is acceptable and supported, you may be able to make-up the exam within one week of the exam date, otherwise your remaining lecture exams will be prorated (that is, worth more). Be aware that absence letters do not excuse students from class or ensure that make-up work will be permitted.

Lecture/Lab Calendar, Exams and Assignment Due Dates (Fall 2018)

Monday	Lecture	<u>Introduction to the fungi</u>
08/27/18	Laboratory	<input type="checkbox"/> The Magic of Fungi
Wednesday	Lecture	<u>Introduction to the Kingdom Fungi</u>
08/29/18	Laboratory	<input type="checkbox"/> Use and care of the microscope
Monday	Lecture	Labor Day - No Class!
09/03/18	Laboratory	
Wednesday	Lecture	<u>Introduction to the Basidiomycota</u>
09/05/18	Laboratory	<input type="checkbox"/> Hyphae <input type="checkbox"/> Culture Techniques
Monday	Lecture	<u>Agaricomycetidae</u>
09/10/18	Laboratory	<input type="checkbox"/> Agaricomycetidae lab <input type="checkbox"/> hand out Agaricomycetidae Presentations
Wednesday	Lecture	"aphyllophorales" I
09/12/18	Laboratory	<input type="checkbox"/> aphylophorales I lab
Monday	Lecture	"aphyllophorales" II (same handout as for Lecture 5)
09/17/18	Laboratory	<input type="checkbox"/> aphylophorales II lab
Wednesday	Lecture	<input type="checkbox"/> Agaricomycetidae Presentations
09/19/18	Laboratory	
Monday	Lecture	<u>FIELD TRIP to Brownfield Woods</u>
09/24/18	Laboratory	<input type="checkbox"/> <u>Fungus Collection instructions</u> <input type="checkbox"/> <u>Specimen labels for collection</u> <input type="checkbox"/> <u>Culture Collection datasheet</u> <input type="checkbox"/> <u>Isolation from Basidiomycota</u> <input type="checkbox"/> <u>Isolation of Endophytic Fungi</u> <input type="checkbox"/> <u>Isolation of Aquatic Fungi</u> <input type="checkbox"/> <u>Isolation of Dung Fungi</u> <input type="checkbox"/> <u>Isolation of Water Molds</u> <input type="checkbox"/> <u>Media Information</u>
Wednesday	Lecture	<u>Smuts</u>
09/26/18	Laboratory	<input type="checkbox"/> work on specimens from field trip
Monday	Lecture	<u>Rusts</u>
10/01/18	Laboratory	<input type="checkbox"/> Smuts & Rusts lab
Wednesday	Lecture	EXAM I
10/03/18	Laboratory	
Monday	Lecture	<u>Introduction to Ascomycota</u>

10/08/18	Laboratory	<input type="checkbox"/> <u>Human Pathogens Presentations</u> <input type="checkbox"/> <u>Ascomycota Info</u>
Wednesday	Lecture	<u>Yeasts & Taphrina</u>
10/10/18	Laboratory	<input type="checkbox"/> Yeasts & Taphrina lab
Monday	Lecture	<u>Eurotiomycetes</u>
10/15/18	Laboratory	<input type="checkbox"/> Eurotiomycetes lab
Wednesday	Lecture	<u>Erysiphales</u> <input type="checkbox"/> <u>Human Pathogens Presentations</u>
10/17/18	Laboratory	<input type="checkbox"/> <u>Blastomycosis</u> <input type="checkbox"/> <u>Candida</u> <input type="checkbox"/> <u>Coccidioidomycosis</u> <input type="checkbox"/> <u>Cryptococcosis</u> <input type="checkbox"/> <u>Histoplasmosis</u>
Monday	Lecture	<u>discomycetes</u>
10/22/18	Laboratory	<input type="checkbox"/> discomycetes lab
Wednesday	Lecture	<u>pyrenomycetes</u>
10/24/18	Laboratory	<input type="checkbox"/> pyrenomycetes lab
Monday	Lecture	<u>loculoascomycetes</u>
10/29/18	Laboratory	<input type="checkbox"/> loculoascomycetes lab
Wednesday	Lecture	<u>mitosporic fungi</u>
10/31/18	Laboratory	<input type="checkbox"/> mitosporic fungi lab
Monday	Lecture	<u>FIELD TRIP to Hart Woods</u>
11/05/18	Laboratory	<input type="checkbox"/> <u>Hart Woods aerial shot.jpg</u> <input type="checkbox"/> <u>Hart Woods contour map.jpg</u>
Wednesday	Lecture	Work on collections from field trip!
11/07/18	Laboratory	
Monday	Lecture	<u>lichens</u>
11/12/18	Laboratory	<input type="checkbox"/> lichens lab
Wednesday	Lecture	EXAM II
11/14/18	Laboratory	
Monday	Lecture	THANKSGIVING BREAK
11/19/18	Laboratory	
Wednesday	Lecture	THANKSGIVING BREAK
11/21/18	Laboratory	
Monday	Lecture	<u>Glomeromycota</u>

11/26/18	Laboratory	☐ Glomeromycota Lab
Wednesday	Lecture	<u>Zygomycota I</u>
11/28/18	Laboratory	☐ Zygomycota I Lab - Collections are DUE!
Monday	Lecture	<u>Zygomycota II</u>
12/03/18	Laboratory	☐ Zygomycota II Lab
Wednesday	Lecture	<u>Chytridiomycota</u>
12/05/18	Laboratory	☐ Chytridiomycota Lab
Monday	Lecture	<u>Oomycota</u>
12/10/18	Laboratory	☐ Oomycota Lab
Wednesday	Lecture	<u>slime molds</u>
12/12/18	Laboratory	☐ slime molds Lab
TBD		
12/##/18	#-#pm	