

Syllabus – Online Version of Biology of Ascomycetes and Basidiomycetes (BOT 359) Spring 2021

Professor: Terry W. Henkel, Ph.D.

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Virtual Office Hours: 1-3 pm Monday & Wednesday, or by appointment. Office hours Zoom link:

<https://humboldtstate.zoom.us/j/7422300625>

Meeting times: None. Asynchronous. Virtual lectures and lab/field exercises posted weekly on Canvas.

Lab Instructors: Section 11-Henkel; Section 12-Allchin

Required Online Textbook: *Introduction to Fungi* (2007), 3rd Edition, J. Webster & R.W.S. Weber (digital version posted on Canvas).

Lab Equipment: None. Due to the pandemic we are online-only, no hands-on work.

Course Format: The course consists of weekly lectures and labs in a half semester format. Therefore the course is 2-unit and will end at mid-semester. Lectures will cover life histories, systematics, ecology, genetics, and practical applications of two major phyla of Kingdom *Fungi*, the *Ascomycota* and *Basidiomycota*. Laboratories will focus on anatomy, morphology, and taxonomy of these fungi.

Lecture Schedule:

Week of:	
Jan 19-22	<i>Basidiomycota</i> : Introduction; form and function of basidiomata
Jan 25-29	<i>Basidiomycota</i> : Sexual reproduction, life cycles
Feb 1-5	<i>Basidiomycota</i> : Wood and litter decomposition
Feb 8-12	<i>Basidiomycota</i> : Mycorrhizae
Feb 15-19	Lecture examination; <i>Ascomycota</i> : Introduction, structure & classification
Feb 22-26	<i>Spring Break</i>
Mar 1-5	<i>Ascomycota</i> : Sexual and vegetative compatibility systems
Mar 8-12	<i>Ascomycota</i> : Lichens
Mar 15-19	Lecture Examination

Laboratory Schedule:

Week of:	
Jan 19-22	<i>Basidiomycota</i> : <i>Agaricales</i> , <i>Russulales</i> , <i>Boletales</i>
Jan 25-29	<i>Basidiomycota</i> : Aphyllorphoroid fungi
Feb 1-5	<i>Basidiomycota</i> : Gasteroid fungi
Feb 8-12	<i>Basidiomycota</i> : Rusts; jelly fungi
Feb 15-19	Laboratory Examination; <i>Ascomycota</i> : archiascomycetes; yeasts, plectomycetes
Feb 22-26	<i>Spring Break</i>
Mar 1-5	<i>Ascomycota</i> : pyrenomycetes; loculoascomycetes; discomycetes
Mar 8-12	<i>Ascomycota</i> : discomycetes; lichens
Mar 15-19	Laboratory Examination

Group Field Trips: None. Due to the pandemic we are online-only.

Field Videos: Videos will be posted of fungi and relevant ecological scenarios from sites that we would have gone to on field trips under normal conditions (i.e. non-pandemic times). Students are required to watch and study these videos in the context of material covered in the labs.

Canvas: Regular use of CANVAS is REQUIRED of all students in BOT 359. Canvas is an indispensable tool for sharing information and documents between the instructor and students. Lecture outlines, powerpoints, links to recorded lectures, labs & field videos, handouts, and other items will be available exclusively through Canvas.

Examinations: There will be two lecture examinations and two lab examinations. Lecture exams will cover the preceding series of lectures as well as assigned readings from the textbook and research papers. Lab exams will be based on materials observed in the preceding labs.

Readings: Readings will be assigned from the textbook, and you are responsible for this material. Additionally, readings from the primary mycological literature will be assigned and questions regarding this material will appear on the lecture exams.

Grades: A student's grade will consist of lecture & lab exams:

Lab examination	February 15-19	100
Lecture examination	February 15-19	100
Lab examination	March 15-19	100
Lecture examination	March 15-19	100
	Total points =	400

Grading Scale:

% of total points	Grade	% of total points	Grade
100-93	A	77.9-73	C
92.9-90	A-	72.9-70	C-
89.9-88	B+	69.9-68	D+
87.9-83	B	67.9-60	D
82.9-80	B-	59.9- 0	F
79.9-78	C+		

Student learning objectives:

1. Students will be able to use morphological features and life history traits in identification and ecological interpretation of fungi of the phyla *Ascomycota* and *Basidiomycota*.
2. Students will be able to use morphological characteristics in defining groups under traditional taxonomic classification schemes and will interpret the impacts of molecular phylogenetic systematics on contemporary classification schemes in higher fungi by translating molecular phylogenetic trees into Linnaean classifications.
3. Students will be able to organize and synthesize a large body of detailed body of information incorporating aspects of life histories, systematics, ecology, genetics, and practical applications of *Ascomycota* and *Basidiomycota*.

4. Students will be able to use critical reading and thinking skills to interpret and critique research papers from the primary mycological literature.

5. Students will be able to identify and describe economically important *Ascomycota* and *Basidiomycota*, including those used in food processing, industrial biochemical production, wild food sources, as well as crop and forest tree pathogens.

Important Dates Spring 2021: these can be found at the “Academic Deadlines” weblink at:

<https://www.humboldt.edu/events/academic-deadlines>

Additional Information on Campus Policies and Procedures:

<https://academicprograms.humboldt.edu/content/syllabus-addendum>

Additional notes – Incompletes & Unofficial Withdrawals:

→An incomplete (I) is given only when extenuating circumstances prevent a student from completing work in the course; earlier exam scores stand unchanged. Per University policy, an “I” grade remaining incomplete after one year will automatically be changed to “F”.

→Students who stop attending and do not drop the class will not get an Incomplete. The latter will receive a grade of **Unofficial Withdrawal**. For the purposes of grade point average, a grade of “W” is equivalent to an “F”. In fact, a “W” may be worse than an “F” for those students who wish to repeat the course later. Petitions to replace a grade earned in this course with a better grade may be denied if the student has withdrawn from this course unofficially.