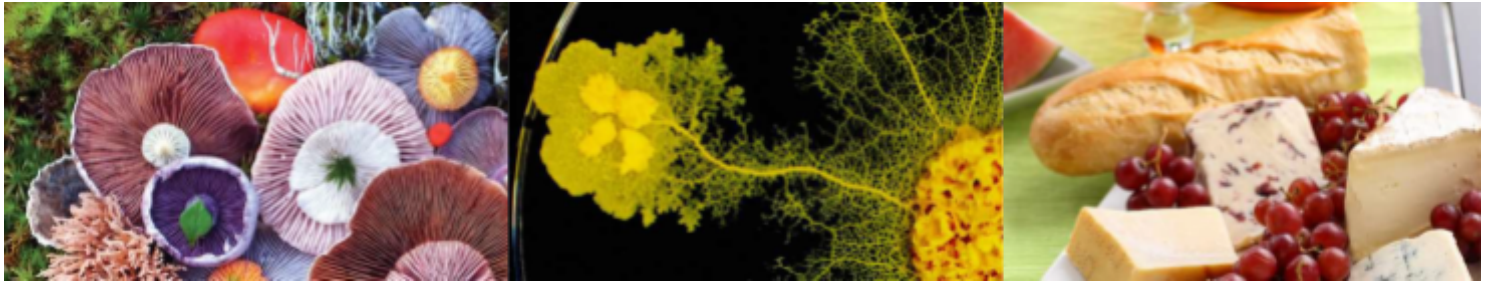


EVPP / 408-001 / 551-001

Mushrooms, Molds and Society

Fall 2025

In person, M 4:30-7:10 pm Angel Cabrera Global Center 1306B, Fairfax



Nature .i\edley, by Jill Bliss on my .i\odem}.let.com; Physarium Polycephalum by Audrey Dussutour, CNRS, on Quanta Magazine; Cheese plate by Julie Ruble, \WillowbirdBaking.com

Instructor: Dr. Natalie Howe Office

hours: online as requested Email:

nhowe4@gmu.edu: 408-838-5242

Course Description and Learning outcomes:

In this course we will explore the diverse and intriguing world of the fungi; how we interact with the fungi every day and how they shape the world around us in seen and unseen ways.

Students will:

- Find and use a variety of sources including scientific sources, popular sources, and alternative ways of knowing to increase understanding of biology, ecology, and uses of fungi.
- Demonstrate understanding of and appreciation for fungal diversity, physiology, and role in ecosystem processes and society.
- Join a community of mycology enthusiasts who consider and communicate a variety of perspectives on how the lives of fungi relate to other fields.

Course Website:

This course will be hosted on Canvas for the Fall 2025 semester. Please ensure you are familiar with accessing and navigating this platform. Resources and support are available at: <https://lms.gmu.edu/getting-started-students/> to help you get started.

If you have any questions, do not hesitate to reach out to me or contact the [ITS Support Center](#) for assistance.

Required texts: None

Prerequisites/Corequisites: None

Registration Restrictions: None

Number of Credits: 3

Repeat Status: Not repeatable for credit

Recommended readings are posted every week. Other recommended texts include:

- * Sheldrake, Merlin. 2020. How Fungi Make Our Worlds, Change our Minds, and Shape our Futures.
- * Anna Lowenhaupt Tsing 2015. The Mushroom at the End of the World



Course Work (Approximate)

Weekly items:

- **Class Participation:** (10%) Much of the course is discussion-based and requires your input in order to be a robust and exciting experience, so students should come to class prepared with a discussion question about the topic, and be prepared to summarize one of the previous classes.
- **Blackboard discussion board** (20%). The online discussion board is an important way to connect mycology with your interests and to find sources that support your ideas.

Assignments:

- **Fungus of the Day** (5%). Once, during the semester, you will start the class with information on a fungus you find intriguing.
- **Sources Worksheet** (5%). Since previous writers and speakers influence our current knowledge and future questions, it's important that our class discussions acknowledge those contributions. So we start the class with exercises that familiarize you with methods of citing sources.
- **Fungi Worksheets** (5% each x 3 worksheets, total 15%). These in-class activities will give you hands-on experience in some of the main aspects of fungal diversity.
- **Herbarium Worksheet** (5%). Complete this worksheet to learn about the importance of natural history collections in general, and to practice accessing international databases that support fungal diversity research.

- **Wikipedia editing** (5%). Students give back to the online community and elaborate on a topic in mycology not currently covered in Wikipedia.
- **Mycologist Profile** (5%) This 2 page paper is a chance for you to explore some contributions of academics and non-academics to the field of mycology.

Semester-long projects:

- **GMU mycoblitiz project** (20%). Document the biodiversity around you using i-Naturalist. All students should document 20 observations in i-naturalist and should donate 5 specimens to the GMU Ted R. Bradley herbarium.
- **Science Communication Project** (10%). You reflect on existing science topic related to mushrooms, and will make an alternative scientific communication approach (infographic/poster, website, video) on a topic of your choosing that demonstrates understanding of the topic and that clearly and compellingly conveys the material to members of the public. This assignment includes a 2 page paper and a presentation.

Week Structure:

I think of this course in 2 parts: the "in-class" time (whether it's online or in person) where we engage with each other and talk about mycology (a total of 3 hours per week), and the "out of class" time where you learn on your own, by reading and writing assignments (minimum 3 hours per week). I think the space where you learn on your own can be the most productive and rewarding part of the class, but I also think, since you can schedule it "whenever", it can often get passed over for more obvious commitments. So I wanted to propose what I think is a good way to stay on top of all the parts of the class so you learn about mushrooms, molds, and society in as low-stress a way as possible.

- **Reading** - make an outline of the main points, and pick out one or two questions you have for classtime. There are also other optional readings if you'd like to go in depth on a topic.
- **Assignments** - Complete your major discussion board post before class, and add discussion responses by the next week. Turn in the weekly assignment online by Friday.
- **In class** - review the slides and videos ahead of time, so you're ready with questions on confusing parts, so that we can have an interactive, dynamic class

Course Schedule (subject to change: updated version [online](#))

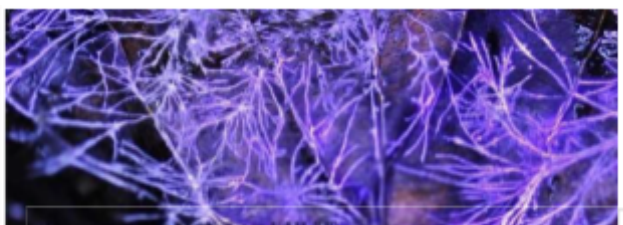
Class meeting in David King Hall 3031 in yellow
 GMU Herbarium Exploratory Hall L109/L110 in green
 Remote class blue

We ek	Date	Topic	Reading due Monday	Items due Friday*
1	Aug 25	Introductions to each other and the course	Fungi in ecosystems - overview (Bunyard, Tsing, Money)	Sources assignment
Labor Day - September 1				
2	Sept 8	Basidiomycetes - lab	Naming, Counting Fungi (Kimmerer, Roach)	Basidiomycetes Worksheet
3	Sept 15	Lichens & forest meditation walk	Lichens (Noell, Sheldrake)	5 observations on inaturalist
4	Sept 22	Ascomycetes & Zygomycetes lab	Biodiversity (Money)	Ascomycete Worksheet,
5	Sept 29	Decomposer fungi	Wood Fungi (Boddy, Sangupta, Tsing)	Decomposer diversity
6	Oct 6	Fungal Pathogens of Plants	Fungal Pathogens Jigsaw Readings (Boyd or Dean)	
Fall Break - Oct 13				
7	Oct 20	Fungal Pathogens of Animals	Fungal Pathogens Jigsaw Readings (Bower or Zimmer)	
8	Oct 27	Herbarium Visit, Mycorrhizae, and animal mutualists	Mycorrhizae & Animal Mutualists (Tedersoo and Li)	
9	Nov 3	Human Diseases & Environmental Justice	Human Disease (Greenfield and Brown or Chang)	Herbarium worksheet
10	Nov 10	Growing Fungi workshop		Wikipedia Draft Article & Share science comm. idea
11	Nov 17	Using fungi to solve problems	Fungal Futures (Sheldrake and Popkin)	
12	Nov 24	Food, Art, and Myths	Fungal Food and Medicine (Garibay-Orijel)	Finish I-naturalist Mycologist Profile
13	Dec 1	Fungal conservation	Fungal conservation (Allen, Liboiron, Singh)	
14	Dec 8	Science communication project, Fungus picnic	Science and Listening (Kearns)	Science Communication Project

Discussion board and fungus of the day assignments will be due on different days for different students.



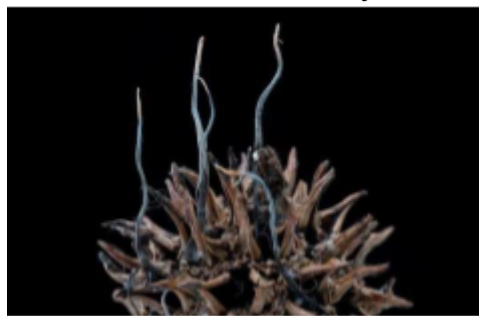
Hygrocybe appalachensis by Walter on Wikimedia Commons



Hygrocybe appalachensis by Walter on Wikimedia Commons

Course Policies and Expectations

1. Respect: We expect all participants to treat each other with respect, and will discuss the details of that expectation in the first meeting of the class.
2. Attendance: Class attendance is important for building our mycology community, but your health comes first (mental and physical health), so please let Natalie know if you'll miss class meetings
3. Grading: The letter grade will be determined at the end of the semester by the percentage of points you earn during the semester according to the following scale:
100-90%= A 89-80%= B 79 -70%= C 69-60%= D 59% or below = F
 - a. Grades will be posted on Canvas.
 - b. Due dates: Some assignments have due dates on the syllabus, and for other assignments, different students will have different due dates for those projects. If you need extensions, or have a conflict or other issue, let Natalie know ahead of time.
4. Communication:
 - a. Office Hours: Natalie will be available by appointment to meet online with students.
 - b. Text message: This is my primary form of personal communication with students please let me know if you prefer communicating a different way
 - c. Students may communicate outside of class on a discord or other channel



Xylaria liquidambar on a Liquidambar styraciflua by Byron Meade (FB) Kentucky, USA



Hypogymnia and Lochnellula by Jeff Hollett (FB) Newfoundland, Canada



Cladonia by Daniel Thompson on Lichens Connecting People (FB)

University Policies

1. Disability Accommodation:

Disability Services at George Mason University is committed to providing equitable access to learning opportunities for all students by upholding the laws that ensure equal treatment of people with disabilities. If you are seeking accommodations for this class, please first visit <http://ds.gmu.edu/> for detailed information about the Disability Services registration process. Then please discuss your approved accommodations with me. Disability Services is located in StudentUnion Building I (SUB I), S 2500. Email: ods@gmu.edu | Phone: (703) 993-2474.

2. Academic Integrity

Students at George Mason University should maintain a high standard of honesty in scholastic work. Please be familiar with the University Honor Code and the guidelines regarding academic integrity. Among the conduct issues addressed are acts of academic dishonesty, including plagiarism or cheating on assignments, examinations, or other academic work, or without prior approval of the instructor, and submitting work already done for another course. Students should avoid all forms of academic dishonesty. See: <https://oai.gmu.edu/mason-honor-code/> for specific details.

3. Sexual Harassment, Sexual Misconduct, and Interpersonal Violence

George Mason University is committed to providing a learning, living and working environment that is free from discrimination and a campus that is free of sexual misconduct and other acts of interpersonal violence in order to promote community well-being and student success. We encourage students who believe that they have been sexually harassed, assaulted or subjected to sexual misconduct to seek assistance and support.

As a faculty member and designated "Responsible Employee," I am required to report all disclosures of sexual assault, interpersonal violence, and stalking to Mason's Title IX Coordinator per university policy 1412. If you wish to speak with someone confidentially, please contact the Student Support and Advocacy Center (703-380-1434), Counseling and Psychological Services (703-993-2380), Student Health Services, or Mason's Title IX Coordinator (703-993-8730; cde@gmu.edu).

4. AI

You're already using some artificial intelligence whenever you look online for information or use spell check. My perspective is that AI is useful for finding general information, but it's not a good choice to use it instead of developing your own perspective, or instead of finding original sources. With that in mind:

- Please feel free use AI to:
 - Identify fungi on inaturalist
 - Find new sources for information about fungi
- Please do not use AI to:
 - Generate questions about the class or the readings
 - Answer questions about your experience in the lab
 - Write discussion board posts or generate annotations as responses to other peoples' posts
 - Creating a science communication project
 - Writing the essay about the mycologist (you can use it to find info on the mycologists, though).