

Biology 456, Fall 2014

Principles of Mycology

Overview: In this course we will learn about the diversity of fungi and their roles in human lives and the environment. In the first ten lectures, we will discuss the major fungal groups in terms of their taxonomy, morphology, life cycles and ecological relationships. The next two lectures will cover fungal genetics, and evolutionary relationships. In the remaining lectures we will examine the important roles of fungi as mutualists, pathogens, and decomposers, as well as their importance as in food production and industrial processes.

The laboratory exercises generally complement the lecture topics. Preparation of a fungus collection will be a major lab activity.

Learning Goals: Upon successful completion of this course you will be able to:

- Elaborate on the diverse ways fungi impact human life and the environment
- Describe the characteristics that distinguish 'fungi' from other organisms in the web of life
- Express a morphological framework for the classification of fungi into Phyla
- Use morphological keys and molecular techniques to identify fungal specimens to genus
- Apply routine methods to isolate, quantify, and maintain fungi cultures in lab conditions

Course requirements: How you will accomplish and demonstrate your learning:

- Three exams – 60 points each
- One comprehensive final exam – 80 points
- A term project – 60 points
 - Written paper (individual) – 40 points
 - Oral presentation (in pairs) – 20 points
- A fungal collection (12 specimens) – 60 points
- Homework assignments – 5 to 10 points each
- In-class Lab assignments – 5 to 10 points each

Grading scale: A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = <60%.
(+/- grading will be used for final grades)

Textbook: Recommended - The Fifth Kingdom, 3rd ed., Bryce Kendrick, Mycologue Publications -.
For most topics, we will have additional readings posted on the web or handed out in class.

Labs: Attendance in lab is required. Lab notes will be handed out in class. Most labs will run the full 3-hour period and include time to work on your fungal collection.

Web Site: A Blackboard Learn course site has been developed where you can access the course schedule, syllabus, web links, slides presentations, additional readings, and study guides. Your ISU NetID is your email username, the portion before the @ sign, your password is the same as your ISU e-mail password.

Attendance Policy: You must complete all the above requirements listed to pass the course. If you have excessive absences, you will not be able to fulfill the requirements, and you should not expect to receive a passing grade. By attending class you will be able to ask questions and assess your understanding of the topics we will be discussing. We will have in-class activities designed to help you learn the material and apply it to real-life situations.

If you must miss class due to illness, family emergency or ISU-sponsored activity, you should let me know ahead of time, if possible, and you will only be able to make up missed quizzes, exams and in-class

assignments if you provide me with a written excuse documenting the situation. If you know must leave class early, please let me know this before class starts.

Special Needs: Please address any special needs or special accommodations with me at the beginning of the semester or as soon as you become aware. Those seeking accommodations based on disabilities should obtain a Student Academic Accommodation Request (SAAR) from the Disability Resources (DR) office (515-294-6624). DR is located in Room 1076 of the Student Services Building. If you are immuno-compromised due to a medical condition or because of medication you are taking you must inform me about this right away.

Academic misconduct: Academic Misconduct in any form is in violation of Iowa State University *Student Disciplinary Regulations* and will not be tolerated. This includes, but is not limited to: copying or sharing answers on tests or assignments, plagiarism, and having someone else do your academic work. Depending on the act, a student could receive an F grade on the test/assignment, F grade for the course, and could be suspended or expelled from the University. See the Conduct Code at www.dso.iastate.edu/ja for more details and a full explanation of the Academic Misconduct policies.