Course: Fungi in the Environment/
CLQ: Fungi-Ecology
Number: 11:776:400/11:015:423
Schedule: Fall Semesters: Tuesdays and Fridays: Period 2 (10:55-12:15)
Primary instructors:

Dr. John Dighton (609-894-8849; dighton@camden.rutgers.edu)
Dr. Jim White (848-732-6286; jwhite@aesop.rutgers.edu)

Course Texts: Hudler (Magical Mushrooms, Mischievous Molds); Kendrick (The Fifth Kingdom)

List of Topics and Activities (target dates provided but may be adjusted; readings are indicated)

1. Introduction-background and context (Dighton; Hudler chapter 1; Sept 4)
2. Fungal structure and properties (Tadych; Sept 7)
3. Introduction: Ecosystems and fungi (Dighton; Sept 11)
4. Non-fungi oomycetes and slime molds (White; Kendrick chapter 1; Sept 14)
5. Fungi and primary productivity – Soil formation and processes (Dighton; Hudler chap. 12; Sept 18)
6. Fungal identification: structures, literature, and bar codes (White; Sept 21)
7. Fungi and primary productivity-mycorrhizae (Dighton; Hudler chap. 14; Sept 25)
8. Lab-making media, culturing fungi, isolation from soil (Bergen; Sept 28)
9. Fungi and primary productivity – mycorrhizae Lab (Dighton; Oct 2)
10. Lab-use of microscopes and identification of microscopic soil fungi (Bergen/ White; Hudler chap.1; Kendrick chap. 1; Oct 5)
11. Mid-term quiz (Oct 9)
12. Mushrooms (White; Kendrick chap. 5; Oct 12)
13. Fungi and Pollution (Dighton, Oct. 16)
14. Begin group projects (Oct 19)
15. Fungi as human food (Dighton; Oct 23)
16. Rusts, smuts and jelly fungi (White; Kendrick chap. 5; Oct 26)
17. Hyphomycetes, Coelomycetes, and Ascomycetes (White; chapter 4; Oct 26)
18. Indoor air quality (Dighton; Oct 30)
19. Fungi and human cultures (White; Nov 2)
20. Medical and industrial mycology (Dighton; Nov 6)
21. Lichens and other symbiotic fungi (White; Kendrick chapters 16 and 17; Nov 9)
22. Project preparation day (Nov 13)
23. Lab-identification of pathogenic fungi (Tadych; Kendrick chap 12; Hudler chap. 3; Nov 16)
24. Systematics and evolution of diaporthalean fungi and other groups (Zhang; Nov 20)
25. Class group oral presentations; every group must be ready to present (Nov 27)
26. Class group oral presentations (Dec 4)
27. Class group oral presentations (Dec 7)
28. Final comprehensive quiz; everything due including optional collections (Dec 11)
**Point distribution:**

Group project oral report (15 min. + 5 min. questions)  
25 points

Group project written report (10 – 20 pages double spaced)  
50 points

Final essay exam and mid-term (open book)  
up to 200 pts (100 pts. each)

Five quizzes @ 5 pts each  
25 points

Total  
300 points

Extra points may be obtained by collecting and identifying fungi (1/4 point per specimen)

Colloquium students will be expected to join in a wiki discussion of at least three papers that are required reading for the course.

**Grading:** Grades will be determined on a 10-point scale.