Syllabus
Biology of Microfungi (BOT 358)
Fall 2010

Instructor: Terry W. Henkel, Ph.D.
Office: Science Building B 123
Telephone: 826-4841
Email: twh5@humboldt.edu
Office Hours: 12-2 pm Tues & Thurs; or by appointment

Meeting Times: Lecture: Mon/Wed 11-11:50 am, Science B 128
Lab: Mon/Wed 2-4:50 pm, Science B 128


Required Lab Equipment: Fine forceps, 2 needle probes, notebook for drawing (unlined), drawing pencils; 10X hand lens (note: slides, coverslips, razorblades, reagents, and culturing equipment will be provided)

Course Format: The course will consist of two lectures and two labs per week. This 2-unit course ends mid-semester (Oct. 14). Lectures will cover life histories, systematics, ecology, genetics, and practical applications of two major phyla of *Kingdom Fungi*, the *Chytridiomycota* and *Zygomycota*, asexual fungi (predominantly *Ascomycota*, form class *Deuteromycetes*), as well as protistan fungi, including the major slime molds (*Myxomycetes* and *Dictyosteliumycetes*) and water molds (*Oomycota*). Laboratories will focus on anatomy, morphology, and taxonomy of these organisms, and will include class projects. Cultures of *Dictyosteliumycetes* and *Oomycota* obtained from nature will be examined over the duration of the course.

Field Trips: Brief excursions will be scheduled to the Arcata Community Forest during lab time to facilitate lab projects. Date(s) to be announced.

Moodle: Regular use of Moodle is REQUIRED of all students in BOT. 358. Lecture outlines, powerpoint presentations, lab manuals, handouts, announcements, and other items will be available (often exclusively) through Moodle.

Examinations: There will be two lecture examinations, two lab quizzes, and one lab practical. The content of exams will cover the preceding series of lectures as well as relevant chapters from the textbook, and assigned readings outside of the textbook. The content of the lab quizzes and practical will be based on materials observed in the preceding labs, and aspects of projects.

Readings: Periodically, 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 exams, practicals, and quizzes:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Lecture exam #1</td>
<td>100</td>
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<tr>
<td>Lecture exam #2</td>
<td>100</td>
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<tr>
<td>Lab practical</td>
<td>100</td>
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<tr>
<td>Lab quizzes (2)</td>
<td>50</td>
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<tr>
<td><strong>Total points</strong></td>
<td><strong>350</strong></td>
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1
Grading Scale:

<table>
<thead>
<tr>
<th>% total points</th>
<th>Grade</th>
<th>% total points</th>
<th>Grade</th>
</tr>
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<tbody>
<tr>
<td>100-93</td>
<td>A</td>
<td>77.9-73</td>
<td>C</td>
</tr>
<tr>
<td>92.9-90</td>
<td>A-</td>
<td>72.9-70</td>
<td>C-</td>
</tr>
<tr>
<td>89.9-88</td>
<td>B+</td>
<td>69.9-68</td>
<td>D+</td>
</tr>
<tr>
<td>87.9-83</td>
<td>B</td>
<td>67.9-60</td>
<td>D</td>
</tr>
<tr>
<td>82.9-80</td>
<td>B-</td>
<td>≤ 59.9</td>
<td>F</td>
</tr>
<tr>
<td>79.9-78</td>
<td>C+</td>
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**Curve:** Grades will be scaled at the end of the semester based on the highest score achieved in the class (i.e. the highest score will form the 100% mark).

**Lecture Schedule:**

<table>
<thead>
<tr>
<th>M</th>
<th>23  Aug</th>
<th>Introduction; “Fungi” vs. “fungi”</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>25  Aug</td>
<td>Myxomycetes I</td>
</tr>
<tr>
<td>M</td>
<td>30  Aug</td>
<td>Myxomycetes II</td>
</tr>
<tr>
<td>W</td>
<td>1  Sept</td>
<td>Dictyosteliomycetes</td>
</tr>
<tr>
<td>M</td>
<td>6  Sept</td>
<td><strong>no class - holiday</strong></td>
</tr>
<tr>
<td>W</td>
<td>8  Sept</td>
<td>Oomycota I</td>
</tr>
<tr>
<td>M</td>
<td>13  Sept</td>
<td>Oomycota II</td>
</tr>
<tr>
<td>W</td>
<td>15  Sept</td>
<td>Chytridiomycota I</td>
</tr>
<tr>
<td>M</td>
<td>20  Sept</td>
<td>Chytridiomycota II</td>
</tr>
<tr>
<td>W</td>
<td>22  Sept</td>
<td><strong>Lecture Examination</strong></td>
</tr>
<tr>
<td>M</td>
<td>27  Sept</td>
<td>Zygomyctota I</td>
</tr>
<tr>
<td>W</td>
<td>29  Sept</td>
<td>Zygomyctota II</td>
</tr>
<tr>
<td>M</td>
<td>4  Oct</td>
<td>deuteromycetes I</td>
</tr>
<tr>
<td>W</td>
<td>6  Oct</td>
<td>deuteromycetes II</td>
</tr>
<tr>
<td>M</td>
<td>11  Oct</td>
<td>TBA</td>
</tr>
<tr>
<td>W</td>
<td>13  Oct</td>
<td><strong>Lecture Examination</strong></td>
</tr>
</tbody>
</table>

**Laboratory Schedule:**

<table>
<thead>
<tr>
<th>M</th>
<th>23  Aug</th>
<th>Organization; introduction to Myxomycetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>25  Aug</td>
<td>Myxomycetes: life history of <em>Physarum polycephalum</em>; ordinal taxonomy</td>
</tr>
<tr>
<td>M</td>
<td>30  Aug</td>
<td>Myxomycetes &amp; Oomycota: field collection, Arcata Community Forest</td>
</tr>
<tr>
<td>W</td>
<td>1  Sept</td>
<td>Myxomycetes: ordinal taxonomy; Oomycota: isolation from nature</td>
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<tr>
<td>M</td>
<td>6  Sept</td>
<td><strong>no lab - holiday</strong></td>
</tr>
<tr>
<td>W</td>
<td>8  Sept</td>
<td>Dictyosteliomycetes: isolation from nature</td>
</tr>
<tr>
<td>M</td>
<td>13  Sept</td>
<td>Oomycota: life history of <em>Saprolegnia</em>; plant parasitic Peronosporales</td>
</tr>
<tr>
<td>W</td>
<td>15  Sept</td>
<td><strong>Quiz; Oomycota (cont.)</strong></td>
</tr>
<tr>
<td>M</td>
<td>20  Sept</td>
<td>Chytridiomycota: life history of <em>Allomyces</em>; plant parasitic forms</td>
</tr>
<tr>
<td>W</td>
<td>22  Sept</td>
<td>Chytridiomycota (cont.)</td>
</tr>
<tr>
<td>M</td>
<td>27  Sept</td>
<td>Zygomyctota: ordinal, family and generic taxonomy</td>
</tr>
<tr>
<td>W</td>
<td>29  Oct</td>
<td>Zygomyctota: ordinal, family and generic taxonomy</td>
</tr>
<tr>
<td>M</td>
<td>4  Oct</td>
<td><strong>Quiz; deuteromycete taxonomy</strong></td>
</tr>
<tr>
<td>W</td>
<td>6  Oct</td>
<td>deuteromycete taxonomy</td>
</tr>
<tr>
<td>M</td>
<td>11  Oct</td>
<td><strong>Lab practical</strong></td>
</tr>
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Important Dates Fall 2010:

Aug. 30 **REGISTRATION DEADLINE** – **ADD** open courses without instructor approval (i.e. permission numbers)

Sept. 21 **REGISTRATION DEADLINE** – 5 pm. Last day to **ADD** courses with permission number. Last day to **DROP** courses without instructor’s & department chair’s signatures, and serious & compelling reason. After this date, a $10 fee required and a “W” grade will be recorded. After this date, a $20 fee required and a “W” grade will be recorded. Also, last day to drop to lower fee level & receive refund of fees, less a $27 administrative charge. Deadline – 5 pm. Last day to change registered class grade option to **AUDIT**.

Oct. 18 Deadline – Last day to change registered class grade option to **CREDIT/NO CREDIT**.

Oct. 26 Deadline – Last day to **WITHDRAW** from fall semester & receive prorated fee refund, less a $27 administrative charge. **NOTE:** If a student is unable to withdraw in person, contact the Office of the Registrar at 707-826-4101 for instructions. See “Withdrawal from Humboldt” in the “Academic Regulations” section of the guide.

Nov. 12 Deadline – Last day to **DROP** a class with serious & compelling reason (not eligible for fee refund); need instructor’s & department chair’s signatures. A $20 fee required and a “W” grade will be recorded. See “Withdrawal from Humboldt” in the “Academic Regulations” section of this guide. Deadline – Last day to **WITHDRAW** from fall semester (not eligible for fee refund).