BIOL 221, Concepts of Botany, Spring 2015

### Web:
http://herbarium.millersville.edu/hardy.php

**Lecture (Roddy 261):** T R, 2:30-3:45
**Labs (Roddy 279):**
- A, M 1-3:50 (Dr. Wagner)
- B, T 9:30-12:20 (Dr. Ladd)
- C, W 1-3:50 (Dr. Wagner)
- D, R 9:30-12:20 (Dr. Hardy)

**Lecture Instructor:** Dr. Christopher Hardy
- Office: Roddy 271
- Tel: 871-2312
- Office hrs: M, T & W 9:20-11:00

**Required Text:**

**Lab Materials:**
2. 3-ring binder with tabs for holding lab handouts.
3. 3-hole looseleaf paper for notes in lab.
4. Colored pencils (at least red, blue, green) for lab drawings.
5. Scientific calculator.

### Schedule

<table>
<thead>
<tr>
<th>Lecture Topic</th>
<th>Lab (may change w/ instructor)</th>
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<tbody>
<tr>
<td><strong>Structure &amp; Development</strong></td>
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| Week of Jan 19: | Introduction  
Ch. 1 & 3 (p. 38-62) | Introduction to Botany |
| Week of Jan 26: | The Primary Plant Body  
Ch. 22 & 25 | Seeds & Seedlings |
| Week of Feb 02: | The Primary Plant Body  
Ch. 24 | Primary Morphology |
| Week of Feb 09: | The Secondary Plant Body  
Ch. 26 | Primary Anatomy |
| Week of Feb 16: | The Secondary Plant Body | Wood, Cork & Bamboo |
| **Physiology & Function** | |
| Week of Feb 23: | Water: Ch. 4 (p. 75-81) & 30  
**Exam 1 (Thu, Feb 26)** | Plant Modifications & Marketplace Vegetables |
| Week of Mar 02: | Hormones & Tropisms  
Ch. 27 & 28 | Water Relations |
| Week of Mar 09: | Spring Break | Spring Break |
| Week of Mar 16: | Photosynthesis  
Ch. 7 | Hormones & Tropisms |
| Week of Mar 23: | Ethnobotany of Secondary Metabolism  
Ch. 2 (p. 30-34) | Photosynthesis |
| **Diversity & Evolution** | |
| Week of Mar 30: | Algae  
Ch. 13 (p. 263-267) & 15 | Ethnobotany of 2° Metabolism |
| Week of Apr 06: | Bryophytes & Pteridophytes (Ch. 16 & 17)  
**Exam 2 (Thu, Apr 9)** | Algae |
| Week of Apr 13: | Gymnosperms  
Ch. 18 | Bryophytes & Pteridophytes |
| Week of Apr 20: | Angiosperms  
Ch. 19 | Gymnosperms |
| Week of Apr 27: | TBA | Angiosperms |

**Final Exam:** Fri, May 8, 12:30-2:30 PM
Reading Assignments  Will be announced in class. You are responsible for all content in the assigned readings.

Grading  A point system is employed. Final letter grades are determined based on the percentage of total possible points you earn as follows (A = 93-100%; A- = 90-92; B+ = 87-89; B = 83-86; B- = 80-82; C+ = 77-79; C = 73-76; C- = 70-72; D+ = 67-69; D = 63-66; D- = 60-62; F = below 60%).

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<thead>
<tr>
<th>Activity</th>
<th>Points</th>
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<tr>
<td>Lecture Exam 1</td>
<td>50</td>
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<tr>
<td>Lecture Exam 2</td>
<td>50</td>
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<tr>
<td>Final Lecture Exam</td>
<td>75</td>
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<tr>
<td>Lab</td>
<td>140</td>
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<td>(scaled from your lab instructor's points)</td>
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<td>Total points possible</td>
<td>315</td>
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Objectives  At the successful completion of Biol 221, a student should be able to
1. Understand the organization in plants from the cellular to tissue to organ to organism level.
2. Understand basic plant metabolism, including Electron Transport, and the Light and Dark Reactions of Photosynthesis.
3. Understand specific aspects of internal transport in plants including diffusion, osmosis, transpiration, translocation, root pressure, turgor pressure, osmotic pressure and plasmolysis.
4. Understand and describe the mechanisms controlling plant behavior to light, gravity, touch, wounding and regeneration, and to flowering.
5. Recognize salient features and diversity within and between major plant taxa, and to develop a lineage of features from plesiomorphic to derived groups of plants.
6. Explain how the biology, anatomy, and structures of plants relate to their uses by humans.
7. Understand basic processes in the production of food, shelter, medicines, from plants.
8. Understand the role of plants in important societal issues.

Special Needs  Please let me know if you have any disabilities or special needs that might affect your performance in this course. I will do my best to accommodate you.

Attendance  Attendance is expected for all lectures and labs.

Honesty  Each student is expected to adhere to the Millersville University's Academic Honesty Policy. Violation of it results in a zero for the assignment. The policy can be found in the Student Handbook and the Academic Honesty and Dishonesty brochure.

No make-up exams.