Botany 200 Syllabus, Fall 2011

Catalog Description:

Botany 200: Introduction to Botany. Lecture and lab emphasize basic principles in plant biology including scientific inquiry, cell biology, genetics, ecology, evolution, and diversity in plant anatomy and physiology.
Meets Mon - Wed - Fri at 11am, lab required

"In accordance with Illinois State Board of Education certification rules, all candidates seeking teacher certification are required by Western Illinois University to obtain a grade of “C” or better in all directed general education course, all core courses, and all courses in the option. Note: A “C-” is below a “C.” Please note: any secondary science teacher certification student wanting to see how this course is aligned with the State and National Standards should see their advisor and/or examine the Secondary Science Teacher Certification WesternOnline Advising site.

Professor:

Dr. Eric Ribbens
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Cell phone: (309) 255-1650
Email: E-Ribbens@wiu.edu
Webpage: http://www.wiu.edu/users/mfer1

Me:

I am a plant ecologist. I’m interested in what plants do, how they interact with other plants and with their environment. Professionally, I am best known for my work in developing spatial models of seedling distributions for use in computer simulation models, but I have also been studying a group of neotropical trees, a small cactus, sustainability, and innovative teaching methods (such as clickers and cases). I have been teaching at Western Illinois University since 2000. I have two daughters, I play flute or piano Sunday mornings at University Baptist Church, and I’m the oldest brother in a big family (8 children, 22 grandchildren). I like jazz and blues, I have published some creative writing, and I think every freezer should hold some popsicles. I struggled with college ... after two years, I dropped out with a GPA of 1.6, and worked for years in factories before going back to college, at first at a community college at night. Use me as a resource! DO NOT HESITATE to set up an appointment to meet with me ... it’s what I expect and want you to do. Note: you will irritate me if you schedule a meeting and then don’t show up! One of the best ways for you to learn is to ask questions. It’s not brown-nosing, it’s not unethical, and it’s not cheating.

Course Goals:

1: Survey the field of botany
2: How is science done?
3: Convince you to change your major to botany because it is so cool
**Course Textbook:**


Overall, I really like this book. The chapters are organized well, and within each chapter the writing is clear and the images superb. Each chapter ends with a good summary and several sets of questions for you to think about.

**Botany of Desire**

**Laboratory:**

You MUST be enrolled in a lab, for which you will need a lab manual: Barden-Gabbei, Laura M., and Sue M. Hum-Musser, editors. 2007. Botany 200: Introduction to Plant Biology.

Departmental policy: if you fail the lab you fail the course!

**Western Online:**  http://westernonline.wiu.edu

We have a course website on western online. If you are registered for this course you should already be able to access the western online website. If you can’t get into the website or you have problems navigating it, ask me for help. Various documents relevant to the course will be posted here. For example, this syllabus is available on the western online website, and I may also post sample test questions or suggestions for studying, etc.

**Attendance:**

You will learn the material and demonstrate your ability most effectively if you attend classes. Therefore, attendance is required. Students who miss classes will need to schedule a time to meet with me to discuss the material you missed. If you are missing too many classes I reserve the right to assign additional assignments or other penalties, including failing the course.

**Grades:**

I calculate grades at the end of the semester, and I don’t curve. **At any point in the semester** I am happy to discuss your grades with you. However, you should realize that there will be quite a bit of uncertainty until the end of the semester, since I don’t know what you will get for lab, and I don’t know how many clicker questions there will be.

you can get plus or minus grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
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<tbody>
<tr>
<td>A</td>
<td>92% or better</td>
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<tr>
<td>A-</td>
<td>90% to 92%</td>
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<tr>
<td>B+</td>
<td>88% to 90%</td>
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<tr>
<td>B</td>
<td>82% to 88%</td>
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<tr>
<td>B-</td>
<td>80% to 82%</td>
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</table>
Grading:

- **C+** 78% to 80%
- **C** 73% to 78%
- **C-** 71% to 73%
- **D+** 69% to 71%
- **D** 64% to 68%
- **F** below 64%

Writing is an important component of this course (a required part of an FYE class). In addition to writing, you are also expected to practice your rewriting skills. Two of the lab reports will be set up to be rewritten (I will announce the rewriting after the lab reports are turned in). All writing assignments will be due Friday in class.

Tests: We will have a midterm test, and an oral final exam. The midterm test will probably be essay questions, but it may have multiple choice questions, short answer / paragraph written responses, drawings, tables, or matching, as well as anything else that I decide to use to evaluate your knowledge. PLEASE write legibly on a test! **If I can’t read your handwriting the answer is wrong, and I am the one who decides whether I can read it or not!** Of course, you also should use good grammar and spelling; points may be deducted or the question may not be graded if there are substantial writing problems.

Quiz Questions: I will drop 10% of these questions at the end of the semester, and scale this out of 50 points at the end of the semester.

Midterm grades: the registrar will ask me to assign midterm grades, and some university events (athletics etc.) also request midterm grade feedback. I am of course very happy to discuss your grade with you at any point in the semester if you wish.

Final exams: The final exam will be an oral exam, to be described in detail later. However, basically you will be expected to discuss a set of questions about botany. The final exam will be comprehensive. **You must pass the final exam in order to pass the course.** In other words, if you can’t demonstrate on the final that you know the subject material, you will get an F for the course.

Resources to help you: First, the Biology Assistance Center (BAC). Second, tutoring will be available for this class. Third, our peer mentor, Rosendo Garcia. Fourth, it is my job and my pleasure to help you. COME TALK TO ME!
Legal Stuff and Behavior:

Course Conduct: You are all adults, and you are in this class because you want to be. This means several things. First, you are responsible for your own learning. I am not responsible if you don’t study. Second, you should act responsibly in class. We may disagree, but we should always treat each other with respect. You can bring ipods, cell phones, computers, etc. to class. You will be talking in class. But the focus of class is **class**. Please don’t surf the web, call your friends, listen to music, or chat about other topics during class. Turn that cell phone off if you can’t leave it alone. Third, don’t lie to me. Finally, respect your fellow students. Stuff that happens in class stays in class. Don’t gossip about them, and don’t do things that disrupt our learning.

Disabilities Statement: “In accordance with University policy and the Americans with Disabilities Act (ADA), academic accommodations may be made for any student who notifies the instructor of the need for an accommodation. For the instructor to provide the proper accommodation(s) you must obtain documentation of the need for an accommodation through Disability Resource Center (DRC) and provide it to the instructor. It is imperative that you take the initiative to bring such needs to the instructor's attention, as he/she is not legally permitted to inquire about such particular needs of students. Students who may require special assistance in emergency evacuations (i.e. fire, tornado, etc.) should contact the instructor as to the most appropriate procedures to follow in such an emergency. Contact Disability Resource Center (DRC) at 298-2512 for additional services.”

One of the things this means is that I will work with you to help you deal with any disability you may have, but if you don’t let me know about it then it’s not my fault if it causes you problems, because I can’t come to you and suggest that you have a disability.

Speaking of disabilities, you should know that I have several problems. In particular I have retinitis pigmentosa, a genetic disease. In my case I have mild to moderate hearing loss (especially in the upper registers) and very limited peripheral vision. In other words, I’m legally blind, and I don’t see anything unless I am looking directly at it. What this means for you is that I may ask you to repeat something you say, and I may not see a hand held up or other things (students goofing off, people having problems, etc.). Please help me: if someone is trying to get my attention let me know about it, and be patient if I ask you to repeat yourself or speak more loudly. If someone is being disruptive, let me know, and tell them to shape up. And if I walk past you in the hall and don’t say hi, it doesn’t mean I don’t like you; it probably just means I didn’t see you!

Plagiarism / Team Work Warning: I have no objections whatsoever to you discussing course problems with other students in the course; in fact, I believe that team analysis and problem-solving can be a powerful learning tool, and I very strongly encourage you to work on the individual topics in teams. However, you must individually prepare your tests, writing assignments, and clicker questions. Do not use other sources in your lab reports without properly
citing the source. For more information, see http://www.wiu.edu/policies/ugdishst.shtml
<table>
<thead>
<tr>
<th>Date</th>
<th>Monday</th>
<th>Lab</th>
<th>Wednesday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>Aug 22</td>
<td>Intro to course</td>
<td>no lab, co-curricular at the Ribbens house</td>
<td>start Unit 1</td>
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<td>Aug 29</td>
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<td>Plant Cells</td>
<td>no class, scheduling conflict</td>
<td>report 1 due</td>
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<tr>
<td>Sept 5</td>
<td>no class</td>
<td>Meet Mendel</td>
<td>start Unit 2</td>
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<td>Sept 11</td>
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<td>Genetics Problems</td>
<td>start Unit 3</td>
<td>report 2 due</td>
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<td>Sept 19</td>
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<td>Angiosperm Anatomy</td>
<td>start Unit 4</td>
<td>report 3 due</td>
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<td>Sept 26</td>
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<td>Angiosperm Physiology</td>
<td>start Unit 5</td>
<td>report 4 due</td>
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<td>Oct 3</td>
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<td>Plant Growth I</td>
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<td>Oct 10</td>
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<td>Plant Growth II</td>
<td>Test</td>
<td>start Unit 6</td>
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<td>Oct 17</td>
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<td>Plant Growth III</td>
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<td>report 5 due</td>
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<td>Oct 24</td>
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<td>Seed Dispersal III</td>
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<td>Oct 31</td>
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<td>Angiosperm Reproduction</td>
<td>start Unit 7</td>
<td>report 6 due</td>
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<td>Nov 7</td>
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<td>Grocery Store Diversity</td>
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<td>Nov 14</td>
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<td>Gymnosperms, Ferns, Bryophytes</td>
<td>start Unit 8</td>
<td>report 7 due</td>
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<tr>
<td>Nov 28</td>
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<td>Protists? or TBD</td>
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<td>Dec 5</td>
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<td>Cladistics and Systematics</td>
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<td>Dec 12</td>
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<td>Small group oral exams will be scheduled this week</td>
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Introduction: World of Botany
read chapter 1
plants are interesting
scientific method (which we will touch on repeatedly)

Unit One: Plant Cells
read chapters 2, 3
differences from animals
cell walls
components, esp chloroplasts and vacuoles

Unit Two: Genetics
read chapters 12, 13
Mendel and his two laws
Mendelian genetics concepts

Unit Three: Angiosperm Anatomy
read chapters 4, 10
monocots and dicots
function of vascular tissue
roots and stems

Unit Four: Angiosperm Physiology
read chapters 5, 8, 9
leaves
secondary growth
transpiration

Unit Five: Growth Experiment and Seed Dispersal
read chapters 9, 11
respiration
experimental design and analysis

Unit Six: Seed Dispersal and Angiosperm Reproduction
read chapters 6, 15, 23
evolution
flowers
life cycle

Unit Seven: Diversity, Gymnosperms, Ferns
read chapters 16, 20, 21, 22
four divisions
grocery store diversity
classification and systematics

Unit Eight (no report): Ecology
read chapters 24, 25, 26
population ecology
biomes
conservation biology
FYE stuff:

25% of your grade must be writing, with at least one rewrite. You must attend at least three co-curricular events that I will schedule. The first one is the supper at my house on Tuesday. Others will be announced ... I will have five.

The second one is the John Hallwas lecture. This year's speaker is Dr. Christopher Sutton, Department of Geography. His lecture entitled “Geography Matters! The Importance of Geographic Literacy in Liberal Arts Education" is on Thursday, 9/8/11 at 7:00 p.m. in the University Union Grand Ballroom on the WIU-Macomb Campus. We will meet after the lecture for a discussion.