Course Description:
Class meets in Waggoner 3 at 9am Monday, Wednesday, and Friday. Labs meet in Waggoner 344 on Tuesdays and Thursdays (you should be scheduled for a section already).

WIU Course catalog says: 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. 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.

Note that this is now also true for biology majors: you need to get a C or higher in order to move to more advanced biology courses.

Professor:
Dr. Eric Ribbens
Office: Waggoner 294
Phone: (309) 255-1650
Email: E-Ribbens@wiu.edu
Webpage: http://www.wiu.edu/users/mfer1

I’ve been teaching at WIU since 2000. I’m a plant ecologist, which means I’m interested in what plants do and why they do it. I study a little prickly pear cactus that grows throughout the northern part of our country from Michigan west to Washington (yes, it grows in Illinois), and I take care of the herbarium here at WIU (a herbarium is a plant museum). My wife Mary Fran and I live near campus with our dog Dirk and our two cats, and I have two teenaged daughters that live in Normal Illinois.

Office hours:
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. So I know what it’s like to have difficulties with college. Use me as a resource! DO NOT HESITATE to email me, ask me questions, or set up an appointment to meet with me ... it’s what I expect and want you to do. 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. My formal office hours this semester are 10am Monday, Wednesday, and Friday, but I’m around quite a bit during the day. If my office door is open, come on in! Warning: the herbarium is behind my office, so if you don’t see me that’s ok, just come in and try to find me. Also, I live very close to WIU, so it’s pretty easy for me to meet with you at my home many days or in the evenings. IF YOU WANT HELP GET IN TOUCH! That’s the college culture: I’m happy to help, but you need to ask.
Laboratory:
You MUST be enrolled in the course 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. Note that I do not set lab rules. It is departmental policy: attendance at each lab is required, and if you fail the lab you fail the course! Note: The bookstore may list a lab dissection kit as required for this course. You don’t have to buy the kit, however.

Clickers:
We will be using iclickers in class. You may have worked with clickers already. They are a piece of hardware you need to buy and register, that will enable you to answer multiple choice questions that I ask during class. WE WILL START USING CLICKERS WEDNESDAY. You don’t need to have yours registered to use it, but you will need to register sooner or later. Clickers will be 20% of your course grade, so you really need to get one. They cost about $40, but my students usually get about a letter grade higher when we use clickers.

Textbook:
We will be using a textbook designed for this course, available from Cognella Publishers. We will do a chapter a week, and you should plan to work through the main part of the chapter (up to the “Review Questions” before we start classwork dealing with the chapter.

Flipping:
We will be using a form of course setup called “flipping”. The basic idea is that instead of coming to lecture and then studying, you read the textbook and other preparatory materials before class and during class we solidify your understanding of concepts and apply them to solve problems. This is a rather different setup, and to make it work it will be important that you read the chapter before we start discussing it in class, AND answer the questions embedded in the textbook (in the textbook). Because this is important, the class T.A. and I will be doing some checking to make sure that you have done the preparatory work; if you haven’t bothered to do it I will take points away, including the possibility of flunking you out of the course. On Monday (or whatever day we start a new unit) you should also bring a piece of paper to class with any questions you have. You can turn that paper in at the beginning of the day and I will begin by trying to answer student questions (and then we will have a quiz!).

Piazza:
Piazza is a course management website, somewhat like Western Online but I think it works better. We will use Piazza to manage class online discussions, and I will post powerpoints and other course resources there. You should have gotten an email about the Piazza account.

Disabilities:
University 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!

**Review Sessions**

I have scheduled a weekly review session on Tuesdays at 4pm in room 202. Basically, I will answer any questions you students ask (if I can!), and we can also use that time to go over important concepts again or for me to ask you some sample test questions.

Two things: first, you do not by any means have to come to review sessions, but I have found that struggling students who regularly attend review sessions do better. Second, I’m sure that Tuesdays at 4pm is simply impossible for some of you. If you want to have a review session with me, but Tuesdays at 4pm doesn’t work for you, you have two options. First, you can schedule an individual review session with me. I do these quite frequently, and I’m happy to meet with you whenever you can if I can be there as well. Second, you can talk to me about scheduling another group session at some other time during the week.

**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](http://www.wiu.edu/policies/ugdishst.shtml)
How to Do Well in this Course:

We will be covering a lot of material in this course, including how science works, and a considerable amount of botany. My goal is for this class to be enjoyable, and for you to learn as much as possible. Although everyone learns slightly differently, I suggest you:

- read the appropriate chapter in the textbook before the week
- work through my study prep notes for the week
- note down areas that you don’t understand
- take notes during class, but don’t try to write down everything on the powerpoints
- after class, I will post the powerpoint to Piazza
- download the powerpoint, go through it, and ask yourself two questions:
  - what did Dr. Ribbens want me to learn?
  - do I know it?

Studying in a small group often works well. If you think you know the subject, try to teach it to someone else. Write test questions, and see if you can answer the questions your friend wrote.

Frequently Asked Questions:

*Do you grade on a curve?* No. I’d be happy if EVERYONE got an A. Likewise, if you don’t do the work, I’m not going to adjust your grade.

*Could you please post your powerpoints ahead of class?* Yes, sort of. I will try to post a weekly preparation powerpoint by Thursday the week before. I’m not going to post daily powerpoints before class, however. First of all, I am often revising them until close to class time. Second, I have clicker questions embedded in the powerpoints, usually with explanations of the correct answer after them. Third, I want you to be paying attention during class. Don’t try to write everything on the powerpoints down! Instead, focus on this question: What does Dr. Ribbens want me to know about this topic? You can get the powerpoint off Piazza later, and after working through it if you have any questions you can come talk to me about them.

*Mandatory attendance is so high school. Do we really have to?* Yes. Good research shows that missing only two days of class a semester is a strong predictor of dropping out of college. I don’t want you to drop out.

*I’m having problems with my lab TA. What should I do?* First, go talk to your TA. Second, you can go talk to Ms. Aanenson, our lab coordinator. Third, come talk to me if neither of these resolve the problem.

*Do you give extra credit?* I don’t like that term; I prefer to say that I give optional additional assignments. The points earned by doing these optional additional assignments will be added to your total grade.

Grading:
540 points and up: A range (A or A-)
480 to 539 points: B range (B or B+ or B-)
430 to 479 points: C range ( C or C+ or C-)
385 to 429 points: D range (D or D+ or D-) 
below 385 points:  F

Labs:  150 points (I won’t know your lab grade until the end of the semester)
Clickers: 100 points (I add up all your clicker points, and at the end of the semester rescale your  
points to 100, dropping 10% of the questions)
Exams: 250 points (3 exams)
Final Exam: 100 points (you must pass the final to pass the course)
Writing Assignments: There will be some optional writing assignments for additional credit, worth 10 points each
Total:  600 points + whatever comes from writing assignments
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<thead>
<tr>
<th>Week</th>
<th>Chapter</th>
<th>Lab</th>
<th>Case / Notes</th>
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<tbody>
<tr>
<td>01 Aug 25</td>
<td>1: What is a plant?</td>
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<td>02 Sept 1</td>
<td>2: How does science work?</td>
<td>Plant Growth: Nutrients and Toxins Part I</td>
<td>no class Monday Scurvy Case</td>
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<tr>
<td>03 Sept 8</td>
<td>3: What kinds of plants are there?</td>
<td>Plant Growth: Nutrients and toxins Part II, Seed Dispersal I</td>
<td>Test 1</td>
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<td>04 Sept 15</td>
<td>4: What is inside a plant?</td>
<td>Plant Growth: Nutrients and Toxins Part III, Seed Dispersal II</td>
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<td>05 Sept 22</td>
<td>5: How do trees grow?</td>
<td>Plant Cells</td>
<td>Dead zone Case</td>
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<td>06 Sept 29</td>
<td>6: How do plants get nutrients?</td>
<td>Angiosperm Anatomy</td>
<td>Test 2</td>
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<td>07 Oct 6</td>
<td>7: How do plants eat?</td>
<td>Angiosperm Anatomy and Physiology</td>
<td>no class Friday</td>
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<td>08 Oct 13</td>
<td>8: How do plants move water and sugar?</td>
<td>Photosynthesis</td>
<td>Japanese knotweed Case</td>
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<td>10 Oct 27</td>
<td>10: How do plants move and respond to their environment?</td>
<td>Reproduction: Angiosperms Part II</td>
<td>Pinyon pine Case</td>
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<td>12 Nov 10</td>
<td>12: How did Mendel study plant genes?</td>
<td>Ferns, Fern-Allies and Bryophytes</td>
<td>Mendel Case</td>
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<td>13 Nov 17</td>
<td>13: DNA technology</td>
<td>Genetics</td>
<td>Golden rice Case</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Notes</td>
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<td>Dec 1</td>
<td>14: Looking to the future: what might happen to plants?</td>
<td>When is a Protist NOT a Protist?</td>
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<td>Dec 8</td>
<td>Plant Systematics and Cladistics</td>
<td>Test 3</td>
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Final Exam: Wednesday 8am Dec 17