Class description: “(General Education/Natural Sciences) A laboratory course recommended for nonscience majors, relating reproduction, heredity, evolution, ecology, and behavior to human life and the problems of society. This general education curriculum course does not count toward a major or minor in biology. IAI: L1 900L.”

“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”.”

Course Goals:

1: Survey the field of biology, especially cells, genetics, evolution, and ecology
2: What is science, and how is science done?
3: How should a non-science major use science, especially biology, in their lives?

Professor:

Dr. Eric Ribbens
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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. 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. You should already have purchased an iclicker from the bookstore. If you don’t have one, get one right away. (If your financial aid hasn’t come in yet come talk to me). We will be using clickers throughout the course. With the clickers, I can put a multiple choice question up on the powerpoint, you can enter your answer, and the computer magically records your answers and will display a graph showing how many students chose each answer option. I like clickers. They keep you awake, they let you and me know how you are doing, and they are fun. Most importantly, I have found that when I use clickers students typically get about 10% higher in the class. That’s great: my goal is for everyone to do well in this course. One warning: using someone else’s clicker for them if they don’t want to come to class is cheating, and I have given students a failing grade in the past for this.

Textbook:
The lecture text is Campbell Essential biology with physiology 4th edition from Pearson Publishing. You will also need to purchase a lab manual for the lab. I have assigned readings each week from this textbook, and some of our Friday problems will probably be taken directly from the textbook. If money is tight for you, I encourage you to find someone in class that you can share a textbook with, but I do want you to have access to one and to read the material assigned.

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 may have a quiz!).
Western Online:
We have a WesternOnline page, which I will not use. You will definitely be using
WesternOnline for the lab portion of your course, and will definitely be hearing more about
WesternOnline during lab.

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.

Email:
I use email a lot, and I expect you will regularly check your university email account for
messages from me about the course. Email is also a good way to ask me questions, and I prefer
that writing assignments be turned in as Word attachments to emails. (I will grade it and send you
a reply that I did so via email). Written papers are easier for me to lose, and I will NOT grade
writing assignments that are handwritten. I will always check my email within 24 hours (barring
a major emergency, which I sure hope doesn’t happen), and if I get an email from you I will send
you a reply.

Cases:
Cases are just a story that presents a problem for you to solve. We will work on cases most
Wednesdays, usually with a combination of powerpoint, handouts, and breakouts into small
group projects. I like cases, because one of my big goals is to get you thinking about biology and
using your biological knowledge to solve real-world problems. They also are more interesting
than simply listening to me talk.

Warning: I will be regularly having groups hand in their analyses, and I will be grading them.
You will NOT automatically get the grade by just scribbling something down. I expect quality
work.

Legal Stuff and Behavior:
Course Conduct: You are all adults, and you are in this class because you want to be in college.
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, 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 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 the Disability Resource Center 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, minitests, and clicker questions. You may not give your clicker to a student to use if you are absent, or use another student’s clicker for them. 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)

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.

**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.

Attendance:
I also use clickers to take attendance. If you forget your clicker, come down to the front and write your name on a piece of paper saying you forgot your clicker, so that I know you were in class (you won’t get the clicker points for that day). You will learn the material and demonstrate your ability most effectively if you attend classes. Therefore, attendance is required. Students who miss classes must write a paper about what we did in class the day you missed. THESE PAPERS ARE DUE WITHIN A WEEK, and if you don’t do them I will deduct two points per day until they are turned in. If they aren’t turned in by the next test you won’t be able to take that test. If you miss too many classes I reserve the right to assign additional assignments or other penalties, including failing the course. (How many is too many? Unless you have really good extenuating circumstances, I think missing ONE class is too many but ...)

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

Midterm grades: the registrar will ask me to assign midterm grades, and some university events (athletics etc.) also request midterm grade feedback. I will file these, and attempt to give the entire class feedback about your grades at those points. And I am of course very happy to discuss your grade with you at any point in the semester if you wish. Just come to my office and we’ll look it up. Just be aware that I won’t know your lab grade and some things (like clicker points) I will only be able to give you an estimated grade.

Exams and minitests:
You will take several tests. The questions on these tests will mostly be paragraph-or-so written answers. I do not use multiple choice questions on these tests, for several reasons. First, 25% of
your grade is already multiple choice, from the clicker questions. Second, my classes do substantially worse when I give multiple choice tests. Typical multiple choice tests produce a class average of about 63%, whereas short answer tests are usually around 75%. But what I really like about short answer is that it gives you an opportunity to show me what you know about bigger concepts. Multiple choice the answer is right there, they usually focus on little picky details, and in an attempt to make it harder we try to hide the answer somehow. My goal isn’t to see if you can outwit me but to see what you can tell me about the concepts we have been exploring. So a typical question will be something like “What is Mendel’s second law, and when is it wrong?” I do not take points off for grammar or spelling mistakes, but if your answer is so befuddled because of them that I don’t understand what you are trying to say then you will lose points. Oh, one more thing: try to write neatly and in a reasonably large font, so I can read it! If I can’t read it I assume it is wrong.

Daily Plan:

Week 01: starts January 19
   Textbook: chapter 1, introduction
   Lab: no lab
   Case: Can of Bull
   No class Monday

Week 02: starts January 26
   Textbook: chapter 25, hormones
   Lab: 1, scientific method
   Case: Sex and Vaccination

Week 03: starts February 2
   Textbook: chapter 26, reproduction
   Lab: 2, organic molecules
   Case: Santhi

Week 04: starts February 9
   Textbook: chapters 4 and 5, cells
   Lab: no lab, Lincoln holiday
   Case: Exploding Fish
   First test Friday

Week 05: starts February 16
   Textbook: chapter 8, cell reproduction
   Lab: 3, microscopes, metrics
   Case: Thomas and Sally
Week 06: starts February 23
Textbook: chapter 9, inheritance
Lab: 5, cell structure and function
Case: Mendel

Week 07: starts March 2
Textbook: chapter 10, DNA
Lab: 6, cell division
Case: genetics problems

Week 08: starts March 9
Textbook: chapter 11, gene control
Lab: 7, monohybrid corn cross
Case: genetics problems and/or review
second test Friday

Spring break week: starts March 16

Week 09: starts March 23
Textbook: 12, DNA technology
Lab: 8, genetics problems
Case: Druid Dracula

Week 10: starts
Textbook: 13, population evolution
Lab: 9, hereditary differences in humans
Case: Dr. Trudeau

Week 11: starts April 6
Textbook: 14, how diversity evolves
Lab: 10, ecology I
Case: Darwin

Week 12: starts April 13
Textbook: 18, ecology
Lab: 11, an antipodal mystery
Case: Dead Zone

Week 13: starts April 20
Textbook: 19, population ecology
Lab: 13, migration
third test Friday
Week 14: starts April 27
   Textbook: 20, ecosystems ecology
   Lab: 14, ecology III
   Case: Sunimoe Oysters

Week 15: starts May 4
   Textbook:
   Lab: 15, animal behavior
   Case: Cat and Bird

Finals Week: starts May 11
   final exam Wednesday at 10am
When you have read and understood this syllabus, please sign this page and hand it in:

I, ___________________________ (your name here),

I have read this syllabus.
I understand the course attendance policy.
I see the daily plan with tests and other assignments scheduled.
I understand this class is designed so that I do some of the studying before the week starts.
I agree to do the reading assignments and other homework.
I understand that I will need to check my email for messages from Dr. Ribbens.
Finally, I promise that the work I turn in will be my own, and that I will not cheat.

Signed: ____________________________________________