

# BIO 114

## - Syllabus

**Note:** This is WKU's online biology lab class. The course is delivered completely online. As such you will be expected to thoroughly understand how to use your computer and the internet. If you have problems using your computer, please drop this class. The online class material can be found at <http://ecourses.wku.edu>. Login using the instructions found on that page.

**There is no Lab Manual to purchase.** Good Luck and Study Hard.

The reason there is no lab manual to purchase is because of several years of course development work by Dr. Robert Wyatt at Western Kentucky University. Dr. Wyatt is currently serving as the Director of Distance Learning at WKU, and we enjoy the fruits of his labor, including for Bio 114 the writing which still forms the basis of most of the announcements, assignments, and syllabus, and for the text and programming that drives the lab modules. We are grateful for his skill and generosity.

**BIO 114 Course Description** – 1 hr. credit. This laboratory course for non-science majors illustrates the processes, concepts, and principles discussed in Biology 113 through investigative activities that emphasize examples from everyday life.

**Course Objectives and General Education Goals** - This course fulfills the D.1. (Science/Mathematics) general education requirement. It will help you attain this general education goal and its corresponding objectives: This course illustrates the biological processes, concepts, and theories as discussed in Biology 113 with a focus on experimentation and data collection. The goals will include: To explore and develop one's understanding of the Biological processes found in everyday life.

As these processes are studied, the student should

- learn to think analytically about the experimental processes
- be able to analyze and focus on the best way of determining an appropriate procedure to answer a question
- gather, interpret, and draw conclusions based on data.
- communicate in ways appropriate to the biological sciences, about the processes studied and results obtained
- become familiar with the use of computers to gather and analyze data

**Introduction** - Lab exercises include "creating wikis" and virtual exercises focused on collecting and analyzing data. **This class requires a lot of work!** A lot of work on both your and my part. If you are not prepared to do the work, please do not register for this class.

**Methods** - Each week, you will complete the scheduled virtual lab exercise(s) or experimental activity for that week: In order to benefit maximally from the lab activities, you need to plan to spend the required time working on each lab, and not attempt to rush just to finish.

Before attempting the lab, you should prepare for class by reading and thinking about the information provided on the Bio 114 and Bio 113 web sites. While doing each lab, you should take the time to observe closely, be thorough in your work, and perhaps take notes. This should give you better data, and allow you to better absorb and learn the material,



thereby **improving your ability to perform well on quizzes**. You might prepare and maintain a notebook into which you can put all your data and notes as well as your lab receipts .

After you have completed a laboratory exercise, you may be expected to spend time analyzing what you did and the significance of your results. Answers to questions may need to be included with lab data to hand in.

**Course Requirements:** This is a non-majors Biology Lab course and has no co- or pre-requisites. There is no book for this class. All the material you need is online. Requirements for this class include either prior knowledge of how to use a typical web site, or a willingness to learn on your own during the first week of class. This is because course announcements, lessons, Labs, all reading assignments, quizzes, and details explaining the policies for this course are found on the Internet.

**Computer-based learning:** Since a computer can be the most valuable tool you can have while in college, it is strongly suggested that you purchase one. How can you expect to succeed in an online course without a computer? The computer that you use must have a good internet connection and be completely functional. It is **your responsibility** to have a computer that works. WKU and Bio 114 are not responsible for malfunctions of your computer. **My computer crashed / I hit the wrong key IS NOT a valid excuse** for missing an assignment or Exam.

You need to work with and submit data in an Excel compatible format. You will need to submit papers in a Word compatible format.

### **Need Help?**

If you find the course incomprehensible or need extra help, be sure to contact me. Don't hesitate to call or e-mail, me: [Dr. Ouida Meier](mailto:ouida.meier@wku.edu). Be sure to contact me (ouida.meier@wku.edu) **BEFORE** the due date, Exam date, etc. I am more than happy to help. However, if you wait until afterwards, or until the last second (i.e. the day before something is due), you will receive NO MERCY. Questions concerning course content are best posted to the course Discussion forum.

**Study Strategies:** Click on this link for study strategies, such as a method called SQ5R, Note taking, and Concept Mapping. These strategies will help you study for ANY class.

**Assignments:** You must read the web material to succeed in this class. The Internet, in general, can also be a useful source of information. Students who do not visit the website and/or do the required reading (a.k.a.: don't try very hard) frequently have difficulty, as they would in any course.

All the due dates for assignments are posted well ahead of time (see below). That means don't even try to tell me you "didn't know something was due, can I turn it in late?"

**Answers to Questions** - Attempt to answer all the questions in the labs to the best of your ability. Direct questions to me if help is needed, however, the student should not expect me to carry out his work. Note that the answers to some of the questions result from the subsequent analysis of the experimental data obtained in virtual labs.

**Quizzes:** There will be a quiz worth 20 pts each and every week. The quiz will be given online. **They will start Monday morning and end Wednesday at midnight. Quizzes cannot be made up.** Grades will not be adjusted for any labs that you miss --"I wasn't near a computer" or "my computer crashed" is not a reason for not learning the material, or not



taking the quiz and then expecting credit. All Quizzes and Exams are "closed book"; no notes, study guides or webpages may be used during quizzes and exams.

### Weekly Quizzes:

- All Quizzes are "closed book"; no notes, study guides or web pages may be used during quizzes and exams
- The Quizzes are graded work. As such, they must be done independently. I can tell if two students submit quizzes from the same or adjacent computers.
- The Quizzes have due dates.
- You CANNOT use the back button or open other pages during a Quiz. **Be aware that your computer is likely to freeze** if you have any other windows open while you take a quiz; this will erase your entries and result in a zero for the quiz.
- Make sure you click outside one of the form elements (boxes, areas to type in, etc.) before you try to scroll the page.

**Midterm and Final Exams:** a 50-point Midterm and a 100-point Final Exam will be given during the course. The Midterm and Final Exams must be proctored. **You must pass the Final Exam to pass the course.** Here is a link to [instructions for proctored Exams](#). Understand that if you have not carefully learned the material for each Lab and Quiz, you are very unlikely to successfully study and recall it for the Midterm and Final Exams.

**Grades:** Grades will be determined based on the total of the points from the weekly, Quizzes, Project assignments, and the Mid-term and Final Exams. Your grade will be awarded based on your percentage of the Labs total points possible. If we are able to complete 9 virtual lab sets and 9 quizzes during the semester, then I will drop your lowest lab set and lowest quiz at the end of the course; this policy takes the place of any requests for makeup labs or quizzes.

Your grades will be available online in the Student Tools section (click "Check Your Grade" in this area). I enter your grades for the online lab assignments manually, so give me a little time before you expect your grade to show up.

### Grading scheme

Format	Points
Participation (esp. Discussion contribution) @ 10 pts total	10
8 Quizzes @ 20 pts each	160
8 Virtual Lab Sets - questions and data @ 15 pts each	120
2 Group Projects @ 30 pts each	60
Midterm Lab Exam (first 7 weeks)	50
Final Lab Exam (comprehensive; passing grade required)	100
Total points	500
> 90% = A, 80-89% = B, 70-79% = C, 60-69% = D, below 60% = F	

At any point during the semester you can easily calculate your cumulative grade so far:  
 $(\text{sum of points earned to date} / \text{sum of points possible to date}) * 100 = \text{earned percentage grade to date}$

**Family Educational Rights and Privacy Act:** Due to the Family Educational Rights and Privacy Act ([FERPA](#)), if you are 18 years old or older, I cannot discuss your grades, etc. with your parents.



**Academic Misconduct:** Dishonesty on quizzes, exams, or written assignments (see WKU's plagiarism statement below) will result in a failing grade for the class. Computers are wonderful things. Each time you send me an assignment the computer tells me where you are and when you sent it (and more if I wish). This means I can tell when two people take the same quiz or assignment from the same computer within a short period of time. If the assignment is for credit then this is cheating and it will not be tolerated. I also know how to use Google, just as you do, and I will search your Quizzes, Exams, and Projects for plagiarized material.

**All Quizzes and Exams are "closed book"; no notes, study guides or webpages may be used during quizzes and exams.**

**WKU's Plagiarism Definition:** "To represent written work taken from another source as one's own is plagiarism. Plagiarism is a serious offense. The academic work of a student must be his/her own. One must give any author credit for source material borrowed from him/her. To lift content directly from a source without giving credit is a flagrant act. To present a borrowed passage without reference to the source after having changed a few words is also plagiarism."

**Withdrawals and Audits:** If you wish to audit or withdraw from the course you should do so by the dates mandated by the University. Be sure you are aware of these dates because credit for the course will not be changed to an audit after the university designated time. You also cannot drop the class or change to Audit or Withdraw after the designated time. Be aware that IT IS YOUR RESPONSIBILITY TO DROP THE CLASS. Do not assume that I will do this for you because you will very likely end up with a grade for the class. University policy states, "Students who, without previous arrangement with the instructor or department, fail to attend the first two class meetings of a course meeting multiple times per week or the first meeting of a class that meets one time per week MAY be dropped from the course; however, students are responsible for officially dropping any course for which they have enrolled."

**Disabilities:** "Students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Office for Student Disability Services in DUC. The OFSDS telephone number is (270) 745-5004 V/TDD. Please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services."

**Weekly Pattern:** The quizzes will be available Monday (12:01 am) through Wednesday (11:55 pm). The lab exercises are available Monday through Friday each week. That means you have three days to take the quiz and five to do the lab exercises. **Waiting until the last day to do the exercise or quiz and then providing some excuse why you could not complete it is not acceptable.**

Read This! By submitting your name on the form you are agreeing to the following:

"I have read the Bio 114 Course Syllabus and understand and accept its contents. I also understand that all work in this course must be my own and all required assignments, projects, and tests must be correctly completed and submitted to receive a passing grade for this course."

**You will not receive any grades for this course** unless you have read and agreed to the Syllabus. (Watch out for pop-up blockers.)

[Click here to indicate your agreement with the above statements.](#)



**Bio 114 Tentative Lab Schedule** - (Note: assignment due dates start right away. Always check the Announcements and Assignments areas to see what each week's assignment will be.)

[WKU Academic Calendar](#)

### Tentative Assignment Schedule

Week	Starting	Quiz	Quiz covers (Quizzes avail. M-W)	Assignments to do (due on Fridays)
1	01/24		Pre-Assessment (not graded)	#1 Answer questions from Introduction and the Virtual Animal Behavior Lab. Submit graph (Excel) of Ethology experiment to Blackboard.
2	01/31	#1	Q - Introduction & Animal Behavior Labs	#2 Do the Carbohydrate, Nucleic acids, and Virtual Spectroscopy Labs. Submit the data, a graph, and answer the questions.
3	02/07	#2	Q - Carbohydrate, Nucleic acids, and Virtual Spectroscopy Labs	#3 Virtual Diffusion Lab and Virtual Enzyme Lab. Submit the data and answer the questions via the web pages.
4	02/14	#3	Q - Diffusion Lab and Enzyme Lab	#4 Virtual Microbiology Lab
5	02/21	#4	Q - Virtual Microbiology Lab	#5 Virtual Fly Lab and Human Genetics Lab
6	02/28	#5	Q - Virtual Fly Lab and Human Genetics Lab	Group Project 1 – Discussion and Final Product count as 30 pts
7	03/07		SPRING BREAK	Study for Mid-term Exam; covers weeks 1-7
8	03/14		Submit group evaluations	Mid-term Exam - must be proctored; avail. 03/11-12 (F-Sa) or 03/14-16 (M-W)
9	03/21		No Quiz	#6 Mendelian Genetics Lab and Virtual Foraging Lab
10	03/28	#6	Q - Mendelian Genetics Lab and Virtual Foraging Lab	Group Project 2 - Discussion and Final Product count as 30 pts
11	04/04		Submit group evaluations	#7 Virtual Evolution Lab
12	04/11	#7	Q - Virtual Evolution Lab	#8 Virtual Anatomy Labs (Pulse and Cardiology)
13	04/18	#8	Q - Virtual Cardiology Lab and Pulse lab	Earth Day Project (Extra Credit)
14	04/25		No Quiz	#9 Virtual Ecology Lab
15	05/02	#9	Q: Virtual Ecology Lab Post-Assessment (not graded)	Study for Final Exam; covers entire semester and must pass in order to pass course
16	05/09			Final Exam on 05/6-7 (F-Sa), or 05/9-12 (M-R) The Final must be proctored.