Biology 1103 Armstrong	11 AM - 12:15 PM, T/TH	Syllabus	Spring, 2011

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary. Changes to the course will be posted on the eLC.

Instructor:	Dr. Norris Armstrong, Room 409B Office hours, Tu/Th 10-11 AM, Mon 1:30-2:30 PM, Wed 2:30-3:30 PM, or by appt.	542-1699 (emergencies only)
Data Specialist:	Ms. Yulonda Davis, Room 403 (*ydavisl@ uga.edu*) See Mrs. Davis for general information about Biology 1103: enrollment, withdrawals, grade problems, and exam scheduling.	542-1684
Lab Coordinator:	Dr. Kristen Miller, Room 402 See Dr. Miller for questions regarding the optional lab associated with this course.	542-1681

How to Prepare for This Course:	
Attendance:	Class time will be used to introduce and apply Biology concepts. To get the most out of lecture, you need to attend regularly, sit in your designated section (see group work below), and to be on time. Please your cell phone off. If you use a laptop computer, please refrain from performing activities that distract you or others around you.
Participation:	I will monitor your understanding of the concepts we are covering using the Interwrite Personal Response System - RF ("clickers"). You can purchase new or used clickers at the campus bookstore, in several stores around town, and through various Internet sources (e.g. eBay). I will pose clicker questions everyday (except test days) throughout the lecture. Responses to these questions will count towards a portion of your final point total at the end of the semester (see below). To get 100% of the clicker points, you need to have submitted answers to 80% of the total clicker questions asked during the semester. All answers, whether correct or not, are accepted. To receive credit for your answer, you need to program your clicker so I can identify who answered these questions. This is done by entering your **UGA login name (myID) as your clicker ID**. I will demonstrate this in class. See also the user manual that may have come with your clicker or the copy posted on eLC. Failure to enter your login name correctly will mean that you will not receive credit for the clicker questions. **Entering responses for someone else who is not in class is not allowed and will be considered to be an academic honesty violation**. **PLEASE NOTE:** If you experience a technical problem with your clicker, you must come and show me an error signal on your clicker (e.g. answer not received) by the end of class. Only in this circumstance will you receive credit for class attendance. Lost clickers, clickers left in your room, clickers with dead batteries, or clickers that did not have your login name properly added will not be considered as a valid excuse for not submitting answers to questions posed in lecture.
Read your Textbook:	Biology: A Guide to the Natural World, by David Krogh, Fourth Edition. A tentative class schedule and reading list is provided on eLC. Please read the assigned sections before coming to class so that you familar with the concepts that will be covered during lecture. Check eLC regularly for updates to the schedule as we proceed through the semester.
Collaborate with your peers	In an ideal world, this class would be tailored to individual students. I would work with each person, determine what they already know, what they were interested in learning, and what confused them in order to customize the course to specifically meet their needs. Unfortunately, I can't manage this all by myself. However, we can move closer to this goal by helping each other. To encourage you to work with and help each other master the material we will cover during the semester, approximately 20% of your grade will come from participation in group activities and testing exercises. Working together in this manner should help you learn and apply information as well as help clarify any confusion you may have. I also think this will help you to develop skills that you are likely to need in your eventual profession such as managing other's activities, collaborating with and providing feedback to others, how to communice effectively, and technology skills.
Technology	We will be using two pieces of technology outside of the classroom. One is the e-Learning Commons (eLC) course management program hosted at http://eLC.uga.edu. Course informnation including announcements, the syllabus, lecture schedule, and exam scores will posted on eLC. You will also use eLC to sign up for groups at the begining of the semester. Your login information is the same as your UGA-mail login and password. If you have any problems or questions about accessing eLC you can contact the EITS Helpdesk: (706) 542-3106, or at http://www.eits.uga.edu/mail-forms/ct.php. Make sure that you are using the appropriate browser on your computer (examples are listed at: http://www.eits.uga.edu/press-releases/2009/elc2.html.) The second techology is **Mastering Biology** (http://www.masteringbio.com/). Mastering Biology is a supplement to the textbook that includes animations, tutorials, and self-quizzing designed to help you learn biology concepts. **You will be assigned regular pre-lecture homework quizzes through the Mastering Biology website.** These homework assignments are open-book and are meant to encourage you to read relevant portions of the text before class and to help you prepare for lecture. Purchase of a new textbook should give you a free subscription to Mastering Biology. Instructions for how to access the website are provided inside the front cover of the text and will also be posted on eLC. You will need to proved the Class ID (**BIOL1103S11ARMSTRONG**) to access the material posted for this class. If you bought a used or older edition of the textbook, access to Mastering Biology can be purchased from the publisher through the Mastering Biology website. If you have any problems or questions about accessing Mastering Biology, support and contact information is provided on the Mastering Biology login page.
Techology Statement:	You need to make sure you have a backup computer if your computer should be down at any time. The Miller Student Learning Center has computers available at all hours and hosts an EITS Helpdesk. It is your responsibility to make sure you have access to eLC and Mastering Biology. **I do not accept technology failures as valid excuses for not completing an assignment**. You will have adequate time to complete assigned work. If you wait until the last minute (shortly before it is due, or outside of 9-5 business hours) I will not be able to help you. If you forget to take an online assessment, it will not be available to make-up. (You can submit Mastering Biology homeworks late with a 20%/day deduction). You have control over your schedule and one of the important skills you need to develop is how to organize and manage your time.

Bioscience Learning Center:	Located in Room 406, the BLC contains a variety of helpful BIO1103-related materials, including a computer system with web access, textbooks on reserve, and a black and white printer for use at 6 cents/page, a color printer for 11 cents/page, and a copier for 11 cents/page (Bulldawg Bucks ONLY) The BLC is scheduled to be open: Monday - Thursday 8:30 AM - 7:00 PM and Fridays 8:30 AM - 5:00 PM

What Will You Learn in This Course:

Course Objectives: In this course, rather than just memorizing and accepting facts, you will learn to organize concepts and use them to develop a way of thinking about how we know what we know about the natural world. Using realistic scenarios, you will acquire problem-solving skills and learn how Biology relates to your own life.

Expected Learning Outcomes: At end of this course you should understand how and why energy is transferred from the environment into and through living organisms, how genetic information is managed and used in organisms, and the factors that affect evolution of organisms over time. In addition to these central biology concepts, I expect students to be able to actually use their knowledge in their own lives. So, by the end of the semester, I expect students to be competent in the following:

	Knowledge	Application of that Knowledge
1	Understand the differences between simple and complex carbohydrates, saturated, unsaturated fats and cholesterol, and proteins and to be able to use that understanding to recognize a food containing these on a food label.	Be able to design a diet for yourself that follows the recommendations of your doctor for adopting a heart-healthy diet or a diabetic diet.
2	Understand the differences between bacteria, viruses, and cells like ours, and how drugs can be used to take advantage of these differences to fight infections.	Be able to explain to your spouse or child why antibiotics would be helpful in fighting off some kinds of infections but not others.
3	Understand how different foods are used by our bodies for energy, and how this changes during exercise.	Be able to evaluate a health claim made by a diet supplement.
4	Understand how chromosomes and their genes are inherited by offspring, and how parents compare to their children or children compare to their siblings in terms of chromosomes and genes.	Understand the results of a paternity test. Explain why the risk of having a child with some genetic disorders such as Down Syndrome increases with parent age.
5	Use a pedigree or read information about a family to determine how a gene is being inherited within that family and the chances that the next offspring will carry or express a specific trait.	Explain how and decide on whether you should be genetically tested for a particular trait using your family history and online sites like the Online Mendelian Inheritance in Man.
6	Understand how you could use DNA genome sequence data to chart the occurrence of color vision in animals.	Explain why it is more likley that one of your male friends is colorblind than one of your female friends.
7	Understand how DNA is copied.	Explain to a friend how DNA can be used as evidence in a court case.
8	Understand how DNA is used to make proteins.	Explain how organisms might be genetically modified to have different traits or produce different kinds of proteins. Explain the pros and cons of this technology.
9	Understand what mutations are and how they can affect a cell.	Understand the role of genes and the environment in the development of cancer. Help your parent understand the relative merits of two different cancer therapies.
10	Understand human reproduction and methods to promote and block reproduction.	Predict the date on which a woman is most likely to conceive using information from her menstrual cycle. Decide if you should try a new birth control method for men.
11.	Understand how and why populations change (evolve) over time.	Explain to a family member how antibiotic resistant bacteria arise and what role improper use of antibiotics plays in this process.

How Will Your Learning Be Measured?

Most of your grade will come from your performance on test questions designed to measure your understanding of the content and your ability to apply that content to real-world situations. Unfortunately, these test questions will all be multiple-choice questions without the ability for you to communicate your understanding in writing. I will try to give you practice at retrieving information and applying it on multiple-choice questions through clicker questions, pre-class online questions, and posted sample questions.

In Class-Exams: Rather than having one or two large exams during the semester, I feel students learn better if they have multiple, frequent tests on less material. It puts less pressure on each test and helps keep you from falling behind in your studying. There will be 6 tests during the semester. Most test questions will come from material covered during lecture and in the reading assignments. However, most of these the questions will focus on how to apply your understanding of the material to real-life situations.

During the first half of each testing period, you will complete and turn in your exams individually. During the second half of the testing period (except for the final exam) your group will complete the same test as a team and will submit a single answer sheet at the end of the class period. Both the individual and group portions of the test will receive separate scores that will be posted on eLC.

In testing, like life, anybody can have a bad day. In order to minimize the effect this may have on your grade, I will allow each student to drop their lowest individual exam score from their grade (no group scores may be dropped). If you are sick and miss a test, there will not be a make-up, instead this will serve as your lowest test grade for dropping. You will however need to explain your absence to your team members, who will be assigning your group contribution score.

The final exam will be cumulative, testing everything that we have covered during the semester. Please come and talk to me early in the semester if you have a conflict with the final exam date and time.

Group Tests: My goal in teaching this course is to get you to learn the basics of Biology that I think you will need in your future lives. I use tests to encourage you to study, and thus learn more about Biology, but also to investigate how well you have mastered the material

and to help determine what grade to give you. To do well on these tests, you should read and study on your own and be able to answer detailed and thought provoking questions about the material. Unfortunately, many students may not realize that they do not understand or are confused about a topic until after seeing a relevant test question. Their grade suffers and they are unlikely to understand the material any better after taking the test than beforehand.

To encourage you to work together to help each other learn and understand the course materia,l you will be asked to choose a group of 5-7 people to work with during the semester (instructions on how to do this will be provided on eLC). In addition to taking individual tests and discussing topics together during class, you will be also asked to tests together with your group. If you experienced difficulty with a question on the individual portion of the exam, you will have the opportunity to have the questions clarified and corrected for you by a member of your group. The group test score will help you improve your overall course grade while the instant feedback can help you learn the material better than simply taking the test on your own enabling you to do better on the final exam. In a way you will be taking on the role of tutors for each other. Additionally, the process of explaining a concept or test question to other students in a group actually helps the student doing the explaining learn the material even better themselves.

Academic integrity means being honest about your intellectual work. Working as a member of a cooperative group is an effective and efficient method for learning biology or any subject. Interacting with other people is a natural way for people to learn, but each person must construct her or his own knowledge in the process. In BIOL1103, we encourage you to work and study together in and out of class meetings. The written materials you produce as homework, in-class activities, and projects will be an outcome of these interactions. However, the materials you produce must be your own.

Peer Evaluations:

For cooperative learning to work, every member of a group needs to come prepared and be willing to share their knowledge with and to work with the rest of the group. Of course, some cooperate more in this regard than others.

To account for this, you will be asked to complete a confidential online peer evaluation system (a link to the peer-evaluation system will be posted on eLC) in which you will rate the contributrions of the other members of your group. The first two evaluations will simply provide feedback so that each member of the group has the opportunity to improve their performance in the eyes of the other group members. **The final peer-evaluation will be used to help determine the group points earned by individual students in the course**. Individual peer evaluation scores will be the average of the scores you receive from the other members of your group (a 100% = full credit). The percentage that you get from your peers will be multiplied by the total points your group received on the group tests to determine the individual group points you will receive.

- **IMPORTANT:**
  - **You will need to use your group number and the 9 digits of your 810# number to access the peer-evaluation system.**
  - **FAILURE TO SUBMIT FINAL PEER EVALUATIONS FOR YOUR GROUP MEMBERS WILL RESULT IN A REMOVAL OF YOU FROM YOUR GROUP AND A LOSS OF THE GROUP POINTS.**
  - **FINAL PEER EVALUATIONS ARE DUE APRIL 26th.**

Final Exam **Final exam, Thursday, 5/5/2011, 12-3 PM in class**

How Will Your Grade Be Determined?

Grading Policy:

Grades in the course will be determined mostly using scores from individual exams, but students will have a chance to improve their scores using group tests and posting notes, by preparing for class through reading reading assignments and answering online assessment questions, and by attending class and answering clicker questions. The group grade will be multiplied by the average group contribution score determined by the other members of your group. The instructor reserves the right to overrule the peer evaluation score if it appears that there will be a miscarriage of justice.

Exams		
Best 4 out of 5 in-class multiple-choice exams	4 x 50 points = 200 total points	40 % of overall grade
5 Group Tests	5 x 20 points = 100 total points (Final group points earned will be determined by the group test average X average peer evaluation)	20 % of overall grade
Final Exam	100 points	20% of overall grade
Preparation and Participation		
Mastering Biology Homework	70 points	14 % of overall grade
Clicker Questions	30 points (response to 80% of in-class questions for full credit)	6 % of overall grade
Total Points	**500 points**	

Grade Received	**Minimum Points**	**Percentage**
A	465	>93%
A-	450	>90%
B+	435	>87%
B	415	>83%
B-	400	>80%
C+	385	>77%
C	365	>73%
C-	350	>70%

	D	300	>60%

Grade Problems:	I encourage students to approach me during the semester with concerns and problems with their grade in the course. If you are doing poorly on the lecture exams you need to stop by and talk to me as soon as possible after you get your exam back. I have 2 office hours a week, when we can sit down and figure out a better strategy for your studying. Many students put this off until late in the semester when it is difficult to turn things around. There is also free tutoring available on campus provided by the division of academic enhancement in Milledge Hall. Once final exams have been graded, I can not change your grade except for clerical errors. You may feel that you are right at the border of a higher grade, but I cannot with fairness add points to your score and not everyone else. Changing your grade simply because you need a higher score is in violation of the "Culture of Honesty" quidelines of the University. A few extra credit opportunities will be available throughout the semester that can help you improve your overall average. However, the best way to improve your grade is to make sure that you complete all assignments in a timely and conscientiuous manner. The grade of incomplete is given to students who for reason of document illness or other emergency were unable to complete a significant portion of of the course. Grades of incomplete are not given simply to avoid a failing grade. If you have a general question ranging from withdrawals versus dropped classes, final exam conflicts and missed classes due to illness or other valid excuses, to the Hope scholarship, you can visit the Student Affairs Website and view the FAQ page: http://www.uga.edu/studentaffairs/index.html.
Exam Grading	If you disagree with the grading of a test question, you may challenge this question in writing via webCT email. In your message you must explain why your answer for a question(s) should be considered correct. We cannot score scantron forms that are incorrectly filled out (missing ID#, etc). If you are missing a test grade, it is **YOUR RESPONSIBILITY** to go to the Biology Office and correct the problem ASAP. Test scores will be posted on webCT. Check your grades as soon as possible. **You have one week following the exam to challenge the accuracy of your grade**.
Disabilities:	Accommodations can be made for students with disabilities. Please meet with me during office hours to discuss your learning needs.
Academic Honesty:	**"Whatever form it takes, academic dishonesty hurts everyone: it is unfair to other students, it diminishes the reputation of the University and the value of the degrees it confers, and it can result in serious disciplinary action" (Dr. Robert Kirkman, Georgia Tech).** As a student of the University of Georgia, it is your responsibility to become familiar with, understand, and abide by the standards contained in "A Culture of Honesty." Students are responsible for informing themselves about those standards before performing any academic work. http://www.uga.edu/ovpi/honesty/acadhon.htm . Ignorance of these regulations is not a defense in cases of infringement. So... Just DON'T Do It! Any person found using unauthorized assistance (including copying answers from another student during the individual minitests will be immediately reported to the Office of the Vice President for Instruction. The minimum penalty for using unauthorized assistance is a failing grade, and the maximum penalty is suspension from the University. **DON'T RISK YOUR ACADEMIC FUTURE - IT IS SIMPLY NOT WORTH IT!**

Biology 1103 - Armstrong			**TENTATIVE Lecture Schedule**	**Spring 2011**
Date	**Day**		**Lecture Topic**	**Reading Assignment**
1-11	Tu		**No Class due to weather**	
1-13	Th		Intro, Life, and Atoms	Chpt 2
1-18	Tu		Atoms (cont.), Chemical Bonds and Water	Chpt 2
1-20	Th		Organic Molecules	Chpt 3
1-25	Tu		Organic Molecules (cont.) and Nutrition	Chpt 3 (cont.) and New Food Pyramid (on eLC)
1-27	Th		**Test #1**	
2-1	Tu		Cells	Chpt 4, Section 21.2
2-3	Th		Cells (cont.) and Cell Membranes	Chpt 5
2-8	Tu		Cell Membranes (cont.), Energy and Enzymes	Chpt 6
2-10	Th		(cont.)	
2-15	Tu		**Test #2**	
2-17	Th		Harvesting energy from food.	Chpt 7
2-22	Tu		(cont.)	
2-24	Th		How plants eat	Chpt 8
3-1	Tu		**Test #3**	
3-3	Th		Courtroom DNA	Sections 13.3, 15.4

3-8	Tu		Genes and Mutations	Sections 13.4, 14-1-14.4
3-10	Th		Cell Division and Disease	Essay pp 172-3, sections 12.4-12.6, and 13.4
3-15	Tu		**No Class: Spring Break**	
3-17	Th		**No Class: Spring Break**	
3-22	Tu		DNA Technology	Sections 15.1-2, 15.6
3-24*	Th		**Test #4**	
3-29	Tu		Mitosis and Meiosis	Sections 9.1-9.4, 10.1-10.4
3-31	Th		Mendelian Genetics	Sections 11.1-11.6
4-5	Tu		Extensions to Mendel	Sections 11.6-12.3
4-7	Th		Extensions to Mendel (cont.)	
4-12	Tu		**Test #5**	
4-14	Th		Human Reproduction	Sections 10.4-10.5, 32.1-32.3
4-19	Tu		Fertilization, Contraception, and Technology	Sections 15.3, 32.4 and Essay on pg 677
4-21	Th		Populations	Sections 32.1-32.3 and Essay on pp 325-327
4-26	Tu		Population Genetics and Natural Selection	Chpt 17
4-28	Th		Speciation and Darwin	Chpt 16, 18
5-5	**Th**	**Final Exam 12-3 PM in class**		
*	Midpoint withdrawal deadline			