BIOLOGY 1103, *CONCEPTS IN BIOLOGY,* 9:30 – 10:45 p.m. T,Th ROOM 404E BIOSCIENCES

SYLLABUS Fall 2013

INSTRUCTOR:
Dr. William Barstow, Room 403B BioScience, 706 542-3143, *barstow@plantbio.uga.edu.*
Walk – in office hours: T, Th 1:00 – 4:00 or by appointment.

LAB PROGRAM DIRECTOR:
Dr. Kristen Miller, Room 402 BioSciences, 706 542-1681, *krmiller@uga.edu* See Dr. Miller with questions regarding laboratory scheduling and or the laboratory program.

DATA COLLECTION SPECIALIST (Grade Problems):
Ms. Yulonda Davis, Room 403A BioSciences, 706 542-1684, *ydavis1@uga.edu* See Ms. Davis for questions about quiz and exam scores, enrollment, withdrawals, exam scheduling.

INTERNET : The Biology Division homepage is: http://www.biosci.uga.edu All Biology 1103 course material will be placed on **eLC .**

TEXTBOOK – Krough, BIOLOGY *a guide to the natural world*, 5th edition, 2011. Pearson Education Inc.

BIOSCIENCE LEARNING CENTER - Room 406 BioScience. Available in the BLC are: study tables, class notes on the "web" with links to related sites, interactive question modules, computer programs, and Internet access. BLC hours: Monday - Thursday 8:30 am - 7:00 pm, Friday 8:30 am - 5:00 pm.

ATTENDANCE - It is important that you make every effort to attend **all** of the lectures. There is a high correlation between higher test grades and attendance. Please arrive on time and avoid leaving early. You are responsible for all lecture material and the assigned material in the text that is relevant to the topics covered in class. Preview the text before coming to class and have a framework for understanding the lecture material. After lecture read the parts of the text directly relating to lecture and review your notes before studying. You should study – at least – 3 hours for each 75 minute lecture. Attendance will be taken – unannounced - throughout the semester.

CELL PHONES AND TEXTING are a distraction to you, your neighbors and to the lecturer. Please turn off your cell phone before entering room 404E. Talking on your cell phone or text messaging during class is inappropriate behavior.

LAPTOP COMPUTERS are also a distraction to others in the class. Please put your laptop away during lecture. You learn best by creating your own handwritten notes.

EXAMINATIONS will be machine graded. YOU WILL NEED A #2 PENCIL for filling out the *ScanTron* forms. Exam scores will be reported to you on eLC. If you have any questions about your test scores, check with Ms. Davis in the Biology Office (room 403). ***You should have a #2 pencil with you for every class! (attendance/ exams).*** Memorize your 810 number – you will need it for quizzes, exams and attendance checks.

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 degree 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". Any person appearing to be academically dishonest will be reported to the office of the Vice President for Instruction. For more information regarding academic dishonesty, please consult "A Culture of Honesty" available on the web at ***www.uga.edu/ovpi/academic_honesty.htm***. Ignorance of these regulations is not a defense in cases of infringement. The penalties for academic dishonesty can be severe. So, JUST DON'T DO IT!

GRADES: There are four (4) fifty (50) question exams and a comprehensive final exam. Each correct exam question is 2 points (100 points/exam). Exams will have a total value of **400** points. The final exam will have **100** questions worth **200** points. Total points for the semester are **600**. 20 or more extra credit points will be available through unannounced attendance checks and quizzes.

Final grades are based on your total accumulated points and will be awarded as listed below:

Possible Points for the Semester	
Exams - 4 exams x 100 points / exam	400 points
Final Exam	200 points
Total	600 points

Grade	%	Total points
A	93 -100	558
A-	90 – 92	540
B+	87 - 89	522
B	83 – 86	498
B-	80 – 82	480
C+	77 – 79	462
C	73 – 76	438
C-	70 – 72	420
D	60 – 69	360
F	<60	

SPECIAL CONSIDERATION IN DETERMINING THE FINAL GRADE: In some instances you may feel that your total points do not accurately reflect your actual level of achievement in the course. This is especially true for people within a few points of the next highest grade. Unfortunately, there is no reasonable way to award higher grades to some borderline cases and not to others and still consider the grading system fair to all. In an effort to take into account all special cases whether or not they are "borderline", **the comprehensive final exam may be reviewed as a separate item.** The final exam will be counted in two ways. First, you will be assigned a letter grade based on the **total number** of points - including the points from the final - out of 600. Then, your final exam score will also be given a letter grade. If the letter grade on the final exam is higher than the letter grade assigned from total points, you will be awarded the higher grade. You can raise your grade in the course as much as **one letter grade**. **However, in order to raise your grade through the final exam, you must have taken all of the exams in the course and can not have more than two unexcused absences from lecture.**

INCOMPLETE: The grade of incomplete is given to students who for reason of illness or accident were unable to complete a segment of the course. Only that segment that was missed will be made up to remove the incomplete. In no case will the grade of incomplete be given as a means to avoid a failing grade.

Final exam -Tuesday December 10, 2013 - 8:00 to 11:00 a.m.

WHAT IS BIOLOGY 1103 at UGA?

Biology 1103 introduces non-science majors to the fundamental processes of all living things, including the chemical and functional composition of cells, genetic continuity, evolution, And the interdependence of natural systems. The course goal is to provide students with enough basic understanding of Biology to make knowledgeable decisions about health, reproduction, and the environment either as patients, informed voters, and even jurors.

By the end of the course, students should be able to:

(1) describe the major classes of biological molecules, identify them in foods, and understand why they are required in our diets and bodies.

(2) characterize cells as the basic units of life and understand how they perform the major functions required for life, including energy transfer, growth, and reproduction.

(3) understand the genetic continuity of life, including the nature and transmission of genes and manipulation of genes in modern DNA technology.

(4) understand how evolution provides the unifying principle of Biology which explains how accumulated genetic change accounts for the huge diversity of life on earth.

(5) understand the basis of ecology and the impact of humans on the environment.

HOW DO I STUDY FOR BIOLOGY?

1) A biology textbook cannot be read the way you would read a novel! Begin by pre-reading the chapter; glance at the section headings, charts and tables in order to organize the material in your mind and stimulate your curiosity. This will make it easier to read the chapter and extract more information from it.

2) Be an active, not passive, reader by stopping frequently (at least every paragraph) and consider what you have just read. What is the concept being discussed? Put it in your own words (out loud or by writing it down); by doing so you are reprocessing the information and taking ownership of it. Place a few key notes in your notebook and compare them with your lecture notes.

3) Become a note taker and not a note copier. To get the most out of taking lecture notes, do it in a systematic manner. First, make sure you attend every lecture. Second, - before lecture- make sure that you have read the assigned textbook material to be covered. You will then use lecture time more efficiently because you will learn more from the lecture and will be able to take better notes having been introduced to the material via the text.

During lecture do not attempt to write down every word that is said (or is on PowerPoint); that approach is futile and unnecessary. Instead, try to focus on the major ideas.

4) Check your eLC account frequently – certainly after each lecture. I will post lecture information (usually PowerPoint slides) and a list of study questions based on the lecture and the text. Be able to explain the answers – from memory – to another person. Do not move on until you have mastered the tasks set forth in the study questions.

5) Form a study group or study with a friend. Take turns explaining the answers to the study questions to each other. Become a teacher!

6) Use google, YouTube, etc. to find additional information about the topics we are studying. If you find something good or useful please share it with me and I will share it with the class.

7) Use the chapter review to check yourself on key terms, applying your knowledge, brief review questions etc.

8) It is too difficult to learn two or three weeks of material the night before a major exam. **Daily studying and rehearsal helps get material into long term memory.**

BIOLOGY 1103 TENTATIVE LECTURE SCHEDULE Fall 2013 - BARSTOW

Date	Day	Lect #	Lecture Topic	Text Reference
Aug.	13 Tu.	01	Introduction / expectations / The nature of science	Ch.1 (1 - 09)
Aug.	15 Th.	02	The nature of biology - elements / atoms, bonding	Ch 1 (09-17). Ch2 (19-25)
Aug.	20 Tu.	03	Bonding / ions / isotopes	Ch.2 (19–31)
Aug.	22 Th.	04	Water, acids and bases	Ch.2 (31–41)
Aug.	27 Tu.	05	Carbon, Functional groups, Macromolecules	Ch. 3 (43-55)
Aug.	29 Th.	06	Macromolecules / calories and nutrition	Ch 3 (55-63) (Ch31 601-610)
Sep.	03 Tu.	07	The Cell – prokaryotic/ eukaryotic, animal - plant	Ch. 4 (65-74) sec. 4.1, 4.3, 4.7
Sep.	05 Th.	08	The Plasma membrane	Ch, 5 (92-107)
Sep.	10 Tu.	09	**EXAM #1**	
Sep.	12 Th.	10	Energy: enzymes	Ch. 6 (108 – 121)
Sep.	17 Tu.	11	Energy from food (mitochondria)	Ch. 7 (122 – 139)
Sep.	19 Th.	12	Photosynthesis (chloroplasts)	Ch. 8 (140-155)
Sep.	24 Tu.	13	Genetics and cell division – cancer	Ch. 9 (156 – 173)
Sep.	26 Th.	14	Meiosis and Sexual Reproduction	Ch 10 (175 – 189)
Oct..	01 Tu.	15	**EXAM #2**	
Oct.	03 Th.	16	Mendel and his discoveries	Ch.11 (190 – 211)
Oct.	08 Tu.	17	Chromosomes and inheritance	Ch.12 (212-231)
Oct.	10 Th.	18	DNA Structure and replication	Ch.13 (233-243)
Oct.	15 Tu.	19	How Proteins are made	Ch.14 (244-261)
Oct.	17 Th.	20	Biotechnology	Ch. 15 (263-281)
Oct.	22 Tu.	21	**EXAM #3**	
Oct.	24 Th.	22	The life of Charles Darwin	Ch.16 (283-289)
Oct.	29 Tu.	23	Natural selection, evidence of evolution	Ch.16 (287-299)
Oct.	31 Th.	24	Great transformations (video)	
Nov.	05 Tu.	25	Microevolution	Ch. 17 (301-317)
Nov.	07 Th.	26	Macroevolution / How do new species arise?	Ch.18 (319-337)
Nov.	12 Tu.	27	Human evolution	Ch. 20 (363 – 374)
Nov.	14 Th.	28	Ecosystems and Biomass	Ch. 36 (36.1, 36.2, 36.3)
Nov.	19 Tu.	29	**EXAM #4**)	
Nov.	21 Th.	30	Human impact on the environment	Ch. 34 (34.4): Ch, 36 (36.4, 36.5, pp 706-720)
Nov.	25 - 29		Thanksgiving Holiday Break	
Dec.	03 Tu.		Friday Class Schedule	
Dec. .	04 Th.		Reading Day	

Final exam -Tuesday December 10, 2013 - 8:00 to 11:00 a.m.