Valdosta State University

BIOL 1108K: Principles of Biology II
Lecture Syllabus (Sections D, DD, E, EE, F, G, H)
Spring 2017

Lecture (BC 1023): **Tuesday and Thursday 2:00 PM – 3:15 PM**

Instructor: Dr. Eric W. Chambers
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Office hours: Tuesday and Thursday 11:30 AM – 12:30 PM

Required Materials:

Lecture Text: Your e-textbook is free and a print version is available at a very low cost! The book is available in a wide variety of free online formats via the website listed below. You can use the book in whichever format(s) you want; we recommend that you download the entire pdf so that you always have access to your book. Biology from OpenStax College, ISBN 1-938168-09-7 https://openstaxcollege.org/textbooks/biology.

Printed copies at a significantly reduced textbook rate are also for sale via the University bookstore or www.openstaxcollege.org

Clicker: You should obtain a Turning Technologies NXT Clicker. You can purchase these in the bookstore. You can earn lecture participation points by attending class and answering interactive clicker questions. **You must bring your clicker to every class in order to earn the points.** Never give your clicker to someone else! Never have someone else's clicker in your possession! If you are caught doing this each of you will lose all your clicker points for the semester!

Clicker info is available at http://www.valdosta.edu/academics/elearning/documents/nxtstudent-response-guide.pdf. Assistance for clicker problems is available in the eLearning office (behind the help desk) in the Odum Library.

Course Description: An introduction to physiological processes in plants and animals. The course will explore topics in organismal structure, nutrition, transport, coordination, reproduction, and development.

Course goals: The purpose of this course is to provide you with a broad introduction to the study of biology. The course is introductory and topical in nature but upon completion of this course you will be prepared for advanced specialized courses in biology. It will also provide you with a background to better understand many of the technological issues and challenges confronting our nation and the world.

This course will focus on understanding the physiology of major systems in plants and animals. You will learn common experimental tools and techniques used in physiology. An emphasis will be placed on learning how to analyze basic biological data using quantitative tools such as Excel.

This course will assist you in developing communication skills as well as information processing skills. These abilities are critical for all students, both those who wish to attend professional school (medical, dental, etc.) and graduate school as well as those who will move directly into the job market following graduation. Your critical thinking skills will be enhanced through analysis of lab exercises, class assignments, and test questions.

Educational outcomes: Listed at the end of syllabus

Attendance: Attendance in lecture is **EXPECTED** by all students.

Lecture Conduct:
- Arrive on time.
- Turn off/silence cell phones during class and lab.
- Don't talk during lecture; if you don't understand something or didn't hear something ask.
- Unless it's an emergency (and using your cell phone does not constitute an emergency) do not get up in the middle of lecture, leave and come back.
- Do not leave class early unless it's an emergency.
- During exams **NOBODY** can leave the exam and re-enter the exam room. If a student leaves, their exam will be graded as is; the student will not be allowed to finish the exam.

Biology Tutoring: The Student Success Center (SSC) at Valdosta State University is located in Langdale Residence Hall above the Tech Shop and is available to all students. The SSC provides free peer tutoring in core curriculum courses, including biology, chemistry, math, writing, and foreign languages. The SSC also provides free professional academic advising and on-campus job information in one location. Call 333-7570 to make an appointment, or visit the website: www.valdosta.edu/ssc.

Withdrawing from the course: The last day to withdraw without penalty is **Thursday, March 10, 2016**. If you don't officially withdraw, and instead just stop coming to class, you will receive an F for the course.

Academic conduct: Cheating and plagiarism will not be tolerated and may result in a failing grade for the assignment, exam or the class. The Department of Biology has a plagiarism policy, which will be handed out during the first lab period.

Student identification: Students should have in their possession at all times their VSU student identification card. In order to verify the identification of students officially enrolled in the course, it is the instructor's prerogative to request official student photo identification cards at any time during lecture.
During examinations, students will routinely be asked to display their VSU student identification cards visibly on the desktop and to make them available for inspection by their instructor and/or assistants.

Privacy Act (FERPA): The Family Educational Rights and Privacy Act (FERPA) prohibits the public posting of grades by social security number or in any manner personally identifiable to the individual student. No grades can be given over the telephone or over email because positive identification can't be made.

Students with disabilities: Students requiring special accommodations because of disability should discuss their needs with me as soon as possible. Those needing accommodations that are not registered with the Special Services Program must contact the Access Office for Students with Disabilities located in Farber Hall. The phone

numbers are 245-2498 (voice) and 219-1348 (tty).

Procedure for exams:

- No books, electronic devices, or notebooks will be allowed during exams and students using such items will be asked to leave and will receive a zero for the exam.
- No talking will be allowed during the exam, but students are permitted to ask the instructor questions.
- Each student will be given an exam to be completed and handed back to the instructor.
- Students must bring a pencil and will take the exam during the stated lecture time only.
- **NOTE:** You will have the class time only to complete each lecture exam.

Grade Assessment: Your final grade will be based on your performance on lecture examinations and the laboratory.

Lecture (500 pts): Lecture constitutes 75% of the course grade

Unit Exams (400 pts). There will be four lecture exams. Each exam will cover the material for a specific unit. Each exam is worth 100 points and will consist of a variety of types of questions that may include matching, multiple choice, labeling, fill in the blank and short answer. **There will be NO make-up exams.** Only students with a University related excuse may take an exam early. Your best policy: **DO NOT MISS EXAMS!**

Final Exam (100 pts): The final will be cumulative and will be worth 100 points. The format will be similar to that of the unit exams. The date of the final is **No Early exams will be given!**

Clicker questions and online quizzes (100 pts): Clickers are more than a tool to measure attendance. They are a quick and rapid means of assessing your understanding of important biological concepts as they are taught. Online quizzes allow you to prepare for the types of questions you could see on an exam. You will receive 3 points for each correct clicker answer and 2 points for an incorrect answer. You can earn a maximum of 60 clicker points. There will also be four 10-point online quizzes during the semester, worth a total of 40 points.

Lab (166 points): Lab constitutes 25% of the course grade

You will receive a separate lab syllabus when you attend your first lab. You lab instructor will provide you details regarding the lab and their grading policy. They will provide me with a percentage grade. I will then convert your lab score on a scale of 0-166 points. For example if you earned a 90% in lab I would convert it in the following way:

0.90 x 166 = 149.4 points – I would then add this to your total lecture points and calculate your grade based on a total of 666 points

How the course grade is calculated: At the end of the semester I will calculate your course grade based on the four exams, the clicker/online quizzes, and your lab grade. You can then elect to take the grade you have earned and skip/drop the final or you can choose to take the final exam and I will then drop your lowest score exam score or your clicker/quiz score and substitute your final exam score.

Sample student 1:

Exam 1	Exam 2	Exam 3	Exam 4	Clicker/quizzes	Final Exam	Lab	Total
80	92	75	90	95	--	150	582

Student one has earned a total of 582 points for the course. We can calculate his/her grade this way: **582/666 = 87.3%.** If this student takes the final and scores above 75, I would then drop the 75 and use their final exam score to determine their final grade.

Grade Scale:

For Biology majors, a grade of C or higher is required for this course.

A 90-100%
B 80-89%
C 70-79%
D 60-69%
F < 60%

Date	Topic	Chapter
Jan. 10	Course Intro; Evolution and Phylogeny	18.1
Jan. 12	Evolution and Phylogeny	18.1; 20
Jan. 17	Evolution and Phylogeny; The Animal Body; Basic form	20; 33
Jan. 19	The Animal Body; Basic form and function	33
Jan. 26	Animal Nutrition and the Digestive System	34
Jan. 28	Animal nutrition and the Digestive System	34
Jan. 31	Nervous system	35
Feb. 2	Nervous System	35
Feb. 7	**Exam #1**	**18.1, 20, 33, 34, 35**
Feb. 9	Sensory systems	36
Feb. 14	The Endocrine System	37
Feb. 16	The Endocrine System	37
Feb. 21	The Endocrine System; The Musculoskeletal System	38
Feb. 23	The Musculoskeletal System	38
Feb. 28	The Respiratory System	39
Mar. 2	The Respiratory System	39
Mar. 7	**Exam #2**	**36, 37, 38, 39**
Mar. 9	The Circulatory System	40
Mar. 14	Spring Break	--
Mar. 16	Spring Break	--
Mar. 21	The Circulatory System	40
Mar. 23	The Excretory System	41
Mar. 28	The Excretory System	41
Mar. 30	Animal Reproduction and Development	43
April 4	Animal Reproduction and Development	43
April 6	**Exam #3**	**40,41,43**
Apr. 11	Seedless Plants	25
Apr. 13	Seed Plants	26
Apr. 18	Plant Form and Physiology	30
Apr. 20	Plant Form and Physiology	30
Apr. 25	Plant and Soil Nutrition	31
Apr. 27	Plant Reproduction	32
Apr. 28	**Exam #4**	**25,26,30,31,32**
May. 1	**Review**	**--**
May 3	**Final Exam**	**Cumulative**

VALDOSTA STATE UNIVERSITY GENERAL EDUCATIONAL OUTCOMES (GEO)

1. Students will demonstrate understanding of the society of the United States and its ideals. They will possess the requisite knowledge of the society of the United States, its ideals, and its functions to enable them to become informed and responsible citizens. They will understand the connections between the individual and society and the roles of social institutions. They will understand the structure and operational principles of the United States government and economic system. They will understand United States history and both the historical and present role of the United States in the world.

2. Students will demonstrate cross-cultural perspectives and knowledge of other societies. They will possess sufficient knowledge of various aspects of another culture, including the language, social and religious customs, aesthetic expression, geography, and intellectual and political history, to enable them to interact with individuals within that society from an informed perspective. They will possess an international viewpoint that will allow them to examine critically the culture of their own nation and to participate in global society.

3. Students will use computer and information technology when appropriate. They will demonstrate knowledge of computer concepts and terminology. They will possess basic working knowledge of a computer operating system. They will be able to use at least two software tools, such as word processors, spreadsheets, database management systems, or statistical packages. They will be able to find information using computer searching tools.

4. Students will express themselves clearly, logically and precisely in writing and in speaking, and they will demonstrate competence in reading and listening. They will display the ability to write coherently in standard English; to speak well; to read, to understand, and to interpret the content of written materials in various disciplines; and to listen effectively and to understand different modes of communication.

5. Students will demonstrate knowledge of scientific and mathematical principles and proficiency in laboratory practices. They will understand the basic concepts and principles underlying scientific methodology and be able to collect, analyze, and interpret data. They will learn a body of scientific knowledge and be able to judge the merits of arguments about scientific issues. They will be able to perform basic algebraic manipulations and to use fundamental algebraic concepts to solve word problems and equations. They will be able to use basic knowledge of statistics to interpret and to analyze data. They will be able to evaluate arguments based on quantitative data.

6. Students will demonstrate knowledge of diverse cultural heritages in the arts, the humanities, and the social sciences. They will develop understanding of the relationships among the visual and performing arts, literature and languages, and history and the social sciences. Students will be versed in approaches appropriate to the study of those disciplines; they will identify and respond to a variety of aesthetic experiences and engage in critical thinking about diverse issues. They will be able to identify the components of and respond to aesthetic experiences in the visual and performing arts. They will develop knowledge of world literature within its historical and cultural frameworks. They will understand modem issues within a historical

context and the role of the individual in various forms of societies and governments.

7. Students will demonstrate the ability to analyze, to evaluate, and to make inferences from oral, written and visual materials. They will be skilled in inquiry, logical reasoning, and critical analysis. They will be able to acquire and evaluate relevant information, analyze arguments, synthesize facts and information, and offer logical arguments leading to creative solutions to problems.

8. Students will demonstrate knowledge of principles of ethics and their employment in the analysis and resolution of moral problems. They will recognize and understand issues in applied ethics. They will understand their own value systems in relation to other value systems. They will judge values and practices in a variety of disciplines.

9. Students will demonstrate understanding of the physical universe and the nature of science, and they will use scientific methods and/or mathematical reasoning and concepts to solve problems.

DEPARTMENT OF BIOLOGY EDUCATIONAL OUTCOMES (BEO)

1. Develop and test hypotheses, collect and analyze data, and present the results and conclusions in both written and oral format used in peer-reviewed journals and at scientific meetings.

2. Describe the evolutionary process responsible for biological diversity, explain the phylogenetic relationships among the other taxa of life, and provide illustrative examples.

3. Demonstrate an understanding of the cellular basis of life.

4. Relate the structure and function of DNA/RNA to the development of form and function of the organism and to heredity

5. Interpret ecological data pertaining to the behavior of the individual organism in its natural environment; to the structure and function of populations, communities, and ecosystems; and to human impacts on these systems and the environment