

## **BIOL 1107: Principles of Biology I Summer Semester 2016**

**Lecture: CRN 50244-Section A: Monday through Thursday 9:35 am – 11:00 am, Room 2022 Bailey Science Center  
Laboratory: Tuesday and Thursday 11:10am – 2:00 pm, Room 1083 Bailey Science Center**

**Instructor:** Dr. John Elder  
Office: BC 2088  
Office hours: Monday, Tuesday, Wednesday and Thursday. 8:00 a.m. – 9:30 a.m., or by appointment  
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**Welcome to Principles of Biology I.** This is the first course in a series designed to help you develop a strong foundation in the biological sciences to build on throughout your studies at VSU and beyond.

**BIOL 1107 Course Description.** An introduction to the principles of biology for science majors, with an emphasis on the cellular nature of life. Concepts covered include the origin and early evolution of cellular life; cell structure, function, metabolism, and reproduction; cell signaling; and gene regulation in bacteria and eukaryotes.

**Course Objectives:** The goal of this course is to stimulate student learning of these basic concepts and to encourage contemplation of the significance of each concept to the general field of biology.

**Course Outcomes:** Develop and test hypotheses, collect and analyze data, and present the results and conclusions Exhibit an understanding of basic biological chemistry Describe the evolutionary processes responsible for biological diversity, explain the phylogenetic relationships among the major taxa of life, and provide examples. Demonstrate an understanding of the cellular basis of life.

### **Required Materials:**

**Text: Openstax Biology:** Lucky you! Your e-textbook is free and a print version is available at very low cost!

Biology from OpenStax College, ISBN 1-938168-09-7, is available free of charge at: <https://openstaxcollege.org/textbooks/biology>. The book is available in a wide variety of free online formats via the website. You can use the book in whichever format(s) you prefer. However, we recommend that you download the entire .pdf to your computer so that you always have access to your text. Printed copies at a significantly reduced textbook rate are also for sale via your college bookstore or [www.openstaxcollege.org](http://www.openstaxcollege.org)

**Laboratory Manual:** Goddard, R.H. Current edition.. Methods and Investigations in Basic Biology, 5<sup>th</sup> ed. Hayden-McNeil Publishing, Plymouth, MI.

**“Clickers”:** Each student is required to obtain a Turning Technologies NXT clicker (available in the bookstore). All students are responsible for having their clickers with them in class. All points accumulated during lecture are generated by clickers. If you do not bring your clicker, no points will be recorded for your participation ⓧ. Clicker info at:  
<http://www.valdosta.edu/distance/clickers/index.shtml>. Ms. Brenda Drew Hoke (BJ) is the current Turning Technologies Intern working in the eLearning office (back behind the Help Desk in the library) and may be available to address issues students are having with clickers.

**Grade Assessment:** Your final grade will be based on your performance on lecture examinations and the laboratory. Additional unannounced research and writing assignments may be assigned to count toward the final grade during the semester. Please read, sign and return provided description of grading for the course.

### **Lecture:**

**Exams.** There will be three lecture exams with the 3<sup>rd</sup> one falling on the scheduled final date. Students are required to learn the lecture material and the readings from the text for all exams. Related information presented in the laboratory may also be included in exams. Exam format will be specified by your instructor. **There are NO MAKEUP EXAMS**, with the exception of those students with a University related excuse or an emergency. Otherwise, a missed exam will be equal to zero points.

**Lecture quizzes:** There will be intermittent short “clicker” quizzes on the readings and lecture. Overall quiz average grades will be worth the equivalent to 1 test. Note this does **not** mean one test grade is dropped. Quizzes are by clicker only and cannot be made up.

The total lecture score will be worth 75% of your grade. 56.25% will be from the exam average, 18.75% from the quiz average. The remaining 25% of the grade is based on the lab score.

### **Laboratory:**

Students will be graded on their performance in laboratory based on attendance, quiz grades, group lab projects, selected

homework assignments, and other assignments as specified by your instructor. **There are NO MAKEUP LABS.**

1. **Lab Quizzes:** Quizzes are given weekly during the first 10 to 15-minutes of each laboratory. DO NOT BE LATE. You will not be allowed extra time if you are late. If you miss the quiz completely, you will receive a zero for the quiz. Some of the questions will cover the procedures and results of the previous week's exercises. Other questions will pertain to procedures for the upcoming lab.

2. **Lab Assignments:** Information for each assignment will be provided in lab.
3. **Group Microscope Project:** Each lab group will develop and complete an experiment and write a summary of the group lab results in standard scientific format. Further information will be provided in lab. All students are required to complete this assignment.
4. **Laboratory Notebook:** Each member of a lab group should actively participate in the lab work and should keep a well organized notebook of his or her lab work. More information will be provided in lab.

#### **Grade Assessment:**

Calculate your overall grade as follows:

(Lab average grade X .25) + (3lecture exams + 1 quiz average grade/4 X .75) = Overall percentage grade.

Overall letter grades will be assigned on a 10 point scale: 90-100% = A, 80-90% = B, 70-80% = C, 60-70% = D, and, 59 % and below = F.

**Mid-term, or in-progress grades:** The instructor is required to submit in-progress grades prior to mid-term as posted (**9/30/2009**). In theory, a mid-term grade is necessary for a student to assess how s/he is doing in class by midterm. In this course, students will have feedback on at least one major exam by midterm, several lab quizzes, lab assignments, and any homework or writing assignments. The instructor will, in general, assign an overall average grade at this point on the normal scale of A-F viewable on Banner. Students receiving a grade of "D" or lower should therefore carefully evaluate their option of dropping this course by midterm without academic penalty.

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

**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](http://www.valdosta.edu/ssc).

**Students with Disabilities:** Students requesting classroom accommodations or modifications because of a documented disability must contact the Access Office for Students with Disabilities located in room 1115 Nevins Hall. The phone number is (229) 245-2498.

#### **Important Dates:**

1. 1<sup>st</sup> class: Wednesday, 8 June 2016
2. Exam 1: Thursday, 23 June, 2016
3. 4th Holiday: Monday, July, 4 2016
4. Midterm: last drop date Tuesday, 5, July 2016
5. Exam 2: Thursday, 14 July, 2016
6. Exam 3 & Last Class: Tuesday, July 26, 2016
7. Final Examination: Thursday, July 28, 2016. 10:15am-12:15pm, BC 2022

#### **TENTATIVE COURSE LECTURE MATERIAL OUTLINE:**

Introduction, What is science? What is Biology?

What is Biology?: Unifying Principles of Life.

Characterization of Life, Evolution and Diversity.

Origin of Life.

Chemistry of Life; Organic molecules, Macromolecules and the origin of life.

Cell Structure & Function.

Origin of Eukaryotic cells.

Biological Membranes; Osmosis, Diffusion, Water Potential, and Transport mechanisms; Water, pH.

Cell Communication.

Basic Metabolism: Energy, Enzymes; Biochemistry.

Cellular Respiration.

Photosynthesis.

Cell Division Cycle, Mitosis, Meiosis, Sexual Life Histories.

DNA Structure and Replication; Protein Synthesis.

Recombinant DNA technology; Restriction Enzymes, Vectors, and Hosts.

## **Understanding Class Rules and Grading for Biology 1107, section A, Summer 2016, John Elder Instructor .**

### **Basic Class rules:**

- I.** **Disruptive behavior:** No disruptive behavior of any kind will be tolerated in this course.
- a. Students should restrict talking, questions and discussion to pertinent questions related to course material.
  - b. Entering a classroom late is discouraged.
  - c. Any student disrupting lectures will be required to leave the classroom.
  - d. Any disruptive student who refuses to leave on request will be removed by campus police.
  - e. I like a relaxed atmosphere, but respect for fellow students and instructors is required.
- II.** **Electronics:** Use of cellular telephones, pagers, or any similar remote communication device is prohibited during scheduled lectures, laboratories, or examinations.
- a. If it is essential to take an emergency, incoming call, then quietly step outside and conduct your business like an adult. Otherwise, students who bring cellular telephones or similar devices to lecture must switch them off prior to the beginning of the lecture period.
  - b. Phones may not be used as calculators on exams.
  - c. Lecture notes may not be photographed or recorded with phone or computer cameras.
  - d. The penalty for using a phone to record lecture notes or during an exam is failure of the course.
  - e. No electronic devices (including cell phones), books, or notebooks will be allowed during exams. Students using such items will be asked to leave and will receive a zero for the exam.
  - f. Laptop computers can be used for note taking during lecture; however, students using them must sit in the first four rows of the classroom. Anyone caught cruising the net instead of taking notes will receive a failing grade for the course.
- III.** **Cheating:** Students caught cheating will receive a grade of "F" for the assignment in question and possibly for the course. Cheating will be reported to the Dean of Students. See your Student handbook for what constitutes catalogue cheating and plagiarism.
- IV.** **Procedure for exams and quizzes:**
- a. You must be on time. Students arriving more than 10 minute late may not take the exam and will receive a grade of zero.
  - b. No talking will be allowed during the exam, however students are welcome to come to the instructor's desk to ask questions about clarification of questions on the exam.
  - c. Each student will be given an exam to be completed and handed back to the instructor.
  - d. You must bring a pencil and will take the exam during the stated lecture time only.
  - e. No electronic devices or aids are allowed during exams. Use constitutes cheating and will result in dismissal and failure of the course.
  - f. A student with more than a single clicker in their possession during any lecture class or exam constitutes cheating by the owners of the clickers and the person in possession of the clickers. This also constitutes cheating and will result in dismissal and failure of the course.
  - g. No make up exams are given except in documented emergency situations. Do not miss exams.
  - h. Every student should bring their University ID.
  - i. You will have the class time only to complete each lecture exam.
  - j. During examinations, students may be asked to display their VSU student identification cards visibly on the desk top and to make them available for inspection by their instructor and/or assistants.
- V.** **Attendance Policy:** Attendance in this course is highly recommended, unless you are sick. Students should be seated at the beginning of class. If you are late, your attendance may not be acknowledged. The student is responsible for all material missed regardless of the reason for absences. **ABSOLUTELY NO LECTURES OR LABORATORIES CAN BE "MADE UP."** Laboratories in particular are important not to miss as stated above. In the event that a student will miss a lab, s/he should notify the instructor in writing within 24 hours of the missed lab. It is the instructor's prerogative to accept the excuse or not. Attendance will be recorded for lab sessions using the lab quiz. **Students who miss two labs without an excuse or three labs total cannot receive a grade above a "D".**

VI. **General Class Policies:**

- a. I understand that this is a science class and that my enrollment is voluntary. I am **here to learn the science** and I am free to drop the course if I do not wish to learn the material.
- b. I understand that my **grades are based solely upon my level of performance**, not on what I may want or think I need.
- c. I understand that the final grade I receive in this course is the grade I “**EARNED**”. The instructor does not “**GIVE**” me a grade.
- d. I understand that it is the instructor’s responsibility to evaluate my performance and to assign a **grade that certifies the level at which I KNOW and UNDERSTAND the course material**.
- e. I understand that **earn my grade by demonstrating** on assigned tests, quizzes and assignments that **I KNOW and UNDERSTAND** the course material.
- f. I understand that it is my responsibility to **master ALL course material** to the level necessary to achieve the grade I want in this class.
- g. I understand that the grade I receive is **NOT based** on the amount of work or effort I do. Effort is my responsibility.
- h. I understand **that late assignments will not be accepted** and will summarily receive a grade of zero.
- i. I understand that **incomplete work will not be accepted** and will summarily receive a grade of zero.
- j. I understand that **work that does not follow instructions in all respects will not be accepted** and will summarily receive a grade of zero.
- k. I understand that in the event of a **personal emergency** resulting in missed assignments it is my responsibility to contact the instructor as soon as possible. I also understand that any possible make up work is strictly at the instructor’s discretion on a case by case basis.
- l. I understand that it is **my responsibility** to make sure I understand all assignment instructions and due dates. It is not the instructors fault if I fail to meet these expectations.
- m. I understand that my grades are based only upon the assignments given. There are **no opportunities for “extra credit” or “additional assignments”**.
- n. I understand that it is **my responsibility to seek additional help** from the instructor or campus tutorial services when needed.
- o. I understand that the time to worry about my grades is all **during the term**. Grades are final after the class is over.
- p. I understand that **no late or additional assignments will be accepted** for any reason after the course closes.
- q. I understand that **grades are not negotiable**. Complaining or begging extra points after the fact are not appropriate behaviors.
- r. I understand that my **grade will be based on the criteria** detailed earlier in this syllabus and that it is my responsibility to seek clarification if it is needed.
- s. I understand that this course will assign grades on a **10 point scale and no curve** is to be used in assigning those grades.
- t. I understand that the instructor cannot and will not predict nor promise any grades before all scores for all assignments are done and the class is completed.
- u. I understand that the instructor will only discuss my final grade for purposes of explanation or correction of a possible mistake. Discussions about disappointment with grades, complaints about grades, grade changes or general whining about poor performance will not be entertained.

**Sign, date and return this page to the instructor. By signing below you are acknowledging that these course rules were explained to you and that you understand and agree to abide by them as they pertain to this course.**

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Signature

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Date