

BIOL 1108K, Principles of Biology II
Fall Semester, 2015 Sections C & D

Lecture (BC 1023): **TR 9:30 a.m. – 10:45 a.m.**
Laboratory (BC 1073): **Section C (CRN): Tues.: 2:00 p.m. – 4:50 p.m.**
 Section D (CRN): Wed.: Noon – 2:50 p.m.

Instructor: Dr. Russ Goddard, BC 2090. (Phone 249-2642; or Dept. office 333-5759)
(**Office hours:** T: 10:50 a.m. – 12:30 p.m.; R: 10:50 a.m. – noon)
Email: rgoddard@valdosta.edu **Note: This is the official contact method and address for Dr. Goddard!**
Dr. Goddard does not respond to email sent through Blazeview!

Course Catalog Description: BIOL 1108 Principles of Biology II; 3-3-4; An introduction to physiological processes in plants and animals. Structure, nutrition, transport, coordination, reproduction, and development are addressed.

Required Materials:

Text: Sadava, D., D.M. Hillis, H.C. Heller, and M.R. Berenbaum. 2011. *Life: The Science of Biology*. 9th edition. Sinauer Associates Inc., Sunderland, MA and W.H. Freeman & Co. Gordonsville, VA.

Laboratory Manual: "Grove, T.J. 2015. *Biology Lab Manual*. Great River Learning." This is an ebook with access card available at the bookstore or from <http://www.grtep.com>. (See BlazeView after the first week of class for more information on purchasing online access to this lab manual).

Highly Recommended Laboratory text: Adams, B.J. and Crawley, J.L. 2013. *Van De Graaff's Photographic Atlas for the Biology Laboratory*, 7e. Morton Publishing.

Additional Course Materials on the BlazeView Course Page. Note: Both of the above sections will be combined in a course named, "*Principles of Biology II Section D2L Fall 2015 CO*"

Note: Turning Point "Clickers" will not be required this semester.

General Objectives: This course continues the introduction to basic principles of biology started in BIOL 1107.

Where BIOL 1107 focused on cellular structure and function addressing how life is similar through unifying cellular mechanisms; BIOL 1108, in concept, was designed as a comparative organismal physiology course to address organismal function and the diversity seen in life. One way of interpreting how we study life (organisms) is that we really ask two basic questions; 1) how do organisms form (structure and development), and 2) how do organisms function (physiology). This course is designed to present the basics of structural development and physiology along two evolutionary lines in particular; those giving rise to multicellular plants and animals. Additionally, comparisons will be made on how organisms obtain energy, how they get their nutrition, how gas exchange is handled, how wastes are managed, how circulation connects many systems, as well as how these systems are regulated, particularly through hormones.

Specific course learning objectives addressed are aligned with Department and University learning objectives and include BIOL objectives 2, 3, and 5 and VSU objective 5. Additionally, as aligned with our core curriculum goals, 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.

Attendance: Attendance in this course absolutely is required, especially in the laboratory. Students should be seated at the beginning of class. The student is responsible for all material missed regardless of the reason for absences.

ABSOLUTELY NO LECTURES OR LABORATORIES CAN BE "MADE UP." In the event that a student will miss a class, s/he should notify the instructor in writing by email BEFORE the missed class. The student will miss any points assessed during the missed class, but penalty points assessed for absences may be waived at the discretion of the instructor.

Graded Course Components: Your final grade will be based on your performance in the following course components:

Additional unannounced in-class assignments may count toward the final grade during the semester.

Lecture: (400 pts): There will be 4 lecture exams and a mandatory comprehensive final exam given on the dates listed

below. Students are required to know the lecture material and the readings from the text for exams and quizzes. Information presented in the laboratory may also be included in these exams. Each exam is 100 pts. Clicker response systems are necessary for exams.

Dropped grade: The lowest score you receive among the four lecture exams will be excluded (dropped) and will not be used for computing your final grade. Therefore, although there are 400 possible points from lecture exams (excluding the final), only 300 of those points will count toward your final grade. **The final exam (100 pts) is mandatory.**

Laboratory: (200 pts) The laboratory is not integrated with the lecture material but is autonomous except that the grade you receive in laboratory is integrated into a single course grade. The major points towards your grade assessed in the laboratory will be through two laboratory practicals. The mid-term practical will be worth 50 points, the final practical will be worth 100 points; the remainder (50 points) is assessed based on attendance, occasional quizzes, and selected homework assignments. As the laboratory is considered an extremely important part to learning "hands-on" biology, points are awarded for your attendance and any student will automatically *lose* points from their final lab grade for any absence from laboratory.

Final Exam (100 pts)

Final grades will be based on a percentage of your cumulative points relative to the total points possible:

Lecture Exams:	400 pts (low dropped)
Laboratory:	200 pts
Final Exam	<u>100 pts</u>
Total:	600 pts

Guaranteed grade distribution is as follows:

A = 90-100% (540 – 600 pts.)
B = 80-89.9% (480 – 539 pts.)
C = 70-79.9% (420 – 479 pts.)
D = 60-69.9% (360 – 419 pts.)
F = ≤ 59.9% (< 359 pts.)

Notes on grading philosophy: Students should note that a grade of "A" in this course represents an exemplary command of the material covered. To obtain this grade of excellence, it is recommended that students study daily and clarify with the professor any problems regarding course information, as they arise. Advice for students on studying is provided at the URL: <http://www.valdosta.edu/~rgoddard/Study.htm>

MAKE-UP EXAMS: The exam schedule is posted below. It is assumed that because students are registered for this course at the scheduled time and exams are given during this time, all students will be able to attend. Additionally, since one exam grade is dropped, absolutely **NO make-up exams are given.** If you cannot make it to a test at the assigned time for ANY reason, your exam grade will be zero and this will be the grade that is dropped in the computation of your final grade. In no circumstance should a student registered for this course miss two exams. If you know you will miss more than one exam time, you should **DROP THIS COURSE NOW.**

EXAM SCHEDULE:

NOTE: YOU MUST BRING YOUR CLICKER WITH YOU FOR ALL EXAMS FOR YOUR EXAM ANSWERS TO BE RECORDED!

You will have one hour of class time only to complete each lecture exam and 2 hours for the final.

Exams will consist of multiple choice questions. The exam schedule is as follows:

Exam 1:	10 Sept. 2015	
Exam 2:	8 Oct. 2015	Mid-term Lab Practical: 6 & 8 Oct. 2015
Exam 3:	10 Nov. 2015	Final Lab Practical 1 & 3 Dec. 2015
Exam 4:	3 Dec. 2015	

Final Examination: **Thursday, 10 December 2015** in BC 1023 from 8 a.m. to 10 a.m.

Procedure for exams:

- No books, electronic devices (including cell phones), or notebooks will be allowed during exams. Students using such items, including cell phones that ring during the exam, will be asked to leave and will receive a zero for the exam. ***Turn off your cell phones during exams!***
- No talking will be allowed during the exam, but students are welcome to come to the instructor's desk to ask questions about the exam.
- Every student should bring their University ID.

BlazeView. Some resources will be made available through BlazeView (accessed through your MyVSU login).

Students experiencing difficulties using BlazeView should seek assistance through the VSU Microcomputing & System Services HELP-Desk located in Odum Library (telephone 245-4357).

Mid-term, or in-progress grades: The instructor is required to submit in-progress grades prior to mid-term (10/8/2015). In this course, students will have feedback on at least one major exam by midterm, several lab assignments, one major laboratory practical, etc. Even if a failing mid-term grade is reported, it can be changed to a grade of excellence by the end of the course if students adjust their time and performance in the class appropriately. Students should therefore carefully evaluate their option of dropping this course by the published date for withdrawals without academic penalty.

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 desk top and to make them available for inspection by their instructor and/or assistants.

Academic Integrity: Any behavior suggestive of academic dishonesty will lead to a reprimand, failure of an assignment, or failure of the course at the discretion of the instructor, but based on the severity of the infraction(s). Cooperative learning and group interactions are common and necessary to scientists and this activity is encouraged in the form of laboratory work and discussions about data and information. However, on assignments designed to assess individual learning of material in the class, work must be completed totally independently. Behavior contrary to this principle constitutes cheating. Students should fully understand that plagiarism is not tolerated in this department or by the instructor and full appreciation for the intellectual property of others should be respected completely.

Plagiarism is the representation of someone else's work as your own. You may not blatantly copy phrases, paragraphs, or ideas from another's work. You cannot paraphrase someone else's ideas and use them as your own. You must analyze all data and work by others and then integrate this information with new data and conclusions that you independently synthesize, properly citing past work that supports your conclusions.

Students should read and be familiar with the Biology Department policy on plagiarism:

<http://www.valdosta.edu/biology/documents/biologyplagiarism.doc> and read and understand the University policy on Academic Integrity:

<http://www.valdosta.edu/academics/academic-affairs/academic-honesty-at-vsuh.php>

Disruptive behavior: No disruptive behavior of any kind will be tolerated in this course. Talking during lectures is disruptive due to the nature of the acoustic design of the room. Students should restrict talking and discussion to pertinent questions related to course material and these questions should be directed toward the instructor. Entering a classroom late is discouraged, particularly from the front of the room, because it is disruptive, as is leaving early. Any student disrupting lectures will be required to leave the classroom. Use of cellular telephones, pagers, or any similar remote communication device is prohibited during scheduled lectures, laboratories, or examinations. If students bring cellular telephones or similar devices to lecture, it is their responsibility to switch them off prior to the beginning of the lecture period. Ringing, buzzing, or any other sounds emitted from such devices will be treated as disruptive behavior on the part of the owner/possessor, and the owner/possessor will be asked to leave lecture immediately (including during exams!).

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, as positive identification cannot be made by this manner. Students may check their grades and unreturned papers/exams any time during the instructor's office hours (BC 2090).

Students with Disabilities: Students requesting classroom accommodations or modifications due to a documented disability must contact the Access Office for Students with Disabilities located in Farber Hall. The phone numbers are 245-2498 (V/VP) and 219-1348 (TTY). <http://www.valdosta.edu/access/>.

Biology 1108 course syllabus (Goddard); Page 4

Tentative Course Schedule: Pre-lab quizzes are due by Tuesday Morning of the week of that lab for ALL sections! Post lab quizzes are due by Friday at Midnight of the week of the lab. All quizzes are accessible through the online lab manual.

Class	Date:	Topics:	Text Readings (pgs):	Laboratory	Notes:
1	18 Aug.	How is comparative physiology used to study organisms?	PowerPoint lecture 1	Exercise 1: Introduction to the Scientific Method and Statistics	Meets in BC Computer Lab #3018
2	20 Aug.	History of Life on Earth	Pg. 506 – 525		
3	25 Aug.	Clickers Required!; Phylogeny	Pg. 449 – 466	Exercise 2: <u>Nonvascular, Seedless Plants (Nontracheophytes): Mosses, Liverworts, and Hornworts</u>	Pre-lab quiz due by 8/25! Post-Lab Quiz due 8/28
4	27 Aug.	Bacteria and Archaea, and Viruses	Pg. 525 – 525		
5	1 Sept.	Origin and Diversification of Eukaryotes	Pg. 549 – 568	Exercise 3: Vascular Plants Ferns, Gymnosperms and Angiosperms	Pre-Lab quiz due 9/1 Post-Lab quiz due 9/4
6	3 Sept.	Evolution of Plants 1: Nonvascular to vascular plants	Pg. 569 – 587		
7	8 Sept.	Evolution of Plants 2: Evolution and diversification of seed plants	Pg. 588 – 607		
8	10 Sept.	EXAM 1		No Lab	
9	15 Sept.	The Plant Body	Pg. 719 – 738	Exercise 4: Plant Cells, Vegetative Organ Structures, and Patterns of Growth	Pre-Lab quiz due 9/15 Post-Lab quiz due 9/18
10	17 Sept.	Regulation of Plant Growth	Pg. 771 – 793		
11	22 Sept.	Gas Exchange & Transport in Plants	Pg. 739 – 754	Exercise 5: Angiosperm Development	Pre-Lab quiz due 9/22 Post-Lab quiz due 9/25
12	24 Sept.	Plant Nutrition	Pg. 755 – 770		
13	29 Sept.	Plant Responses to the Environment	Pg. 814 – 831	Exercise 6: Plant Growth and Transpiration	Pre-Lab quiz due 9/29 Post-Lab quiz due 10/2
14	1 Oct.	Reproduction in Flowering Plants	Pg. 794 – 813		
15	6 Oct.	Evolution and Diversity of Fungi	Pg. 608 - 628	Mid-Term Practical	
	8 Oct.	Midterm date			
16	8 Oct.	EXAM 2			
	12-13 Oct.	Fall Break: No Classes		No Lab	
17	15 Oct.	Animal Origins and Evolution of Body Plans: Phylogeny of Animal Phyla	Pg. 629 – 650		
18	20 Oct.	Animal Development Protostome animals	Pg. 902 – 923 392 – 411; 415 Pg. 651 – 677	Exercise 9 and 10: Introduction to Animal Tissues; External and Internal Anatomy of the Fetal Pig	Pre-Lab quiz due 10/20 Post-Lab quiz due 10/23
19	22 Oct.	Deuterostome animals	Pg. 678 – 707		
20	27 Oct.	Physiology, Homeostasis, Temperature Regulation	Pg. 815 – 833	Exercise 11: Sensory Systems	Pre-Lab quiz due 10/27 Post-Lab quiz due 10/30
21	29 Oct.	Gas Exchange in Animals	Pg. 1005 - 1024		
22	3 Nov.	Salt and Water Balance and Nitrogen Excretion	Pg. 1072 - 1092	Exercise 12: Cardiovascular System	Pre-Lab quiz due 11/3 Post-Lab quiz due 11/6
23	5 Nov.	Animal Hormones	Pg. 834 – 855		
24	10 Nov.	EXAM 3		Exercise 7: Diversity of Porifera, Cnidaria, Platyhelminthes, and Annelida	Pre-Lab quiz due 11/10 Post-Lab quiz due 11/13
25	12 Nov.	Animal Circulatory Systems	Pg. 1026 – 1047		
26	17 Nov.	Animal Nutrition, digestion, absorption	Pg. 1048 - 1070	Exercise 8: Diversity of Mollusca, Nematoda, Arthropoda, Echinodermata and Chordata	Pre-Lab quiz due 11/17 Post-Lab quiz due 11/20
27	19 Nov.	Musculoskeletal Systems:	Pg. 986 - 1004		
28	24 Nov.	Neurons and Nervous Systems	Pg. 943 – 963	Open Study Time	
	25 Nov.	Thanksgiving Holiday – No Class			
29	1 Dec.	Sensory Systems Animal Reproduction	Pg. 946 - 966 Pg. 880 – 901	Final Practical	
30	3 Dec.	EXAM 4			
	10 Dec.	Comprehensive Final Exam: 8:00 a.m. – 10 a.m.	BC 1023		