BSC 2011L - Integrated Principles of Biology II
LABORATORY SYLLABUS
Fall 2009

LOCATION OF LABORATORIES: B-11 and B-22 Bartram Hall
BIOLOGICAL SCIENCES OFFICE: 220 Bartram Hall, 392-1175
COORDINATOR: Dr. Kent A. Vliet (kvliet@ufl.edu), 208 Carr Hall, 392-8130.
REQUIRED TEXT: Vliet, Kent A., Stracey, Christine M., and Cottam, Michael R. (eds.), 2009. *A Lab Manual for Integrated Principles of Biology: Part Two - BSC 2011L, Fifth Edition*. Pearson Custom Publishing, New York. 202 pp.
RECOMMENDED TEXT: Van De Graaf, Kent M., and Crawley, John L. 2005. *Photographic Atlas for the Biology Laboratory, 6th edition*. Morton Publishing Company, Englewood, Colorado. 280 pp.
HOME PAGE: www.bsc.ufl.edu/2011L.html
E-LEARNING: https://lss.at.ufl.edu/

LAB SUPPLIES: Dissecting kit (small probe and seeker, fine dissecting scissors, fine point forceps, scalpel with replaceable blade, teasing needles). The Campus Shop, the Florida Bookstore, and University Book and Supply should carry good kits with these items. **All of these supplies must be furnished by the student**. They will not be available in lab.

GRADING: Your BSC 2011L grade will be based on raw scores from quizzes, practicals, data sheets and prelabs. Specific assignments are detailed in a point breakdown sheet provided with this syllabus. Quizzes generally cover material from the previous lab exercise as well as assigned readings for the present lab. Final letter grade will be assigned based on percentage of the total points earned, using the following cutoffs: A ≥ 90.0%, B+ ≥ 85.0%, B ≥ 80.0%, C+ ≥ 75.0%, C ≥ 70.0%, D+ ≥ 65.0%, D ≥ 60.0%, E < 60%. These cut-offs may be lowered at the discretion of instructors, but they will not be increased. Scores will not be rounded (i.e., 89.9% is not 90%).

Current UF grading policies for assigning grade points can be found at: http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html.

READING ASSIGNMENTS: You should review fully each laboratory assignment *prior* to the laboratory period. In most cases you will be unable to complete the observations and experiments fully and efficiently during the lab period unless you know exactly what is to be done before you walk into the laboratory. Reading assignments are included in this syllabus. Weekly quizzes are based partially on the reading assignments.

NIGHT LABS: Students registered in period 11-E2 lab sections may be required to attend one Saturday morning (9:35 a.m. – 12:35 p.m.) lab session during the semester.

BIOLOGICAL SCIENCES PROGRAM
POLICY ON ACADEMIC INTEGRITY

All students are expected to do their own work. The Biological Sciences Program upholds the Academic Honesty Guidelines of the University of Florida. The taking of information by means of copying homework assignments, working together with another individual(s) on such assignments, or looking or attempting to look at another student's paper during an examination is considered dishonest. The tendering of information, such as giving your work to another student to be used or copied is also considered dishonest. Any evidence of such academic dishonesty will result in the loss of all points on that graded assignment. Additionally, the names of those students so penalized will be reported to the University's Office of Student Judicial Affairs.

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Week	Week of	Laboratory Topic	Reading Assignment
1	24 Aug	****** NO LABS ******	
2	31 Aug	Introduction; Deuterostomes/ Cladistics	Pp. **iv-vi** and Chapters **1** & **2**
3	7 Sept	****** NO LABS ******	
4	14 Sept	Fetal Pig Dissection ***Bring your dissection kits***	Chapters **3** and **4**
5	21 Sept	Sensory Physiology / Library Exercise	Chapter **5**
6	28 Sept	Photosynthesis	Chapter **6**
7	5 Oct	Protists II and Plant Diversity	Chapter **7**
8	12 Oct	****** NO LABS ******	
9	19 Oct	Plant Anatomy	Chapter **8**
10	26 Oct	Spatial Relations	Chapter **10**
11	2 Nov	Population Ecology / Plan project	Chapter **9** (pp. 125-128) **Pre-lab** 1 (pp. 129-130)
12	9 Nov	****** NO LABS ******	
13	16 Nov	Species Interactions	Chapter **11** and Appendix **A**
14	23 Nov	****** NO LABS ******	
15	30 Nov	Biodiversity	**Pre-lab 2** (p. 163) Chapter **12**
16	7 Dec	****** NO LABS ******	

LABORATORY ASSIGNMENT AND POINT BREAKDOWN SHEET

WEEK	ASSIGNMENTS	POINTS
1	****** NO LABS ******	
2	**Chordate Classification:** Complete the cladistics worksheet on pp. 21-27).	___/13
3	****** NO LABS ******	
4	**Fetal Pig (Prelab):** Complete the fetal pig prelab activity handout before coming to lab. **LAB PRACTICAL 1** **Reproductive System:** Complete the data sheet on pp. 53-54.	___/2 ___/20 ___/5
5	**Sensory Physiology (Prelab):** Complete the sensory physiology prelab assignment before coming to lab. **LAB PRACTICAL 2** **Sensory Physiology (Data):** Complete the data sheet on pp. 61-62. **Library Exercise:** Complete a data sheet on pp. 63-65. **This will be due at the beginning of the following lab.**	___/10 ___/20 ___/5 ___/5
6	**QUIZ 1** **Photosynthesis (Data):** Provide the data your group collected in lab (p. 73). Prepare a figure of these data, a best-fit line, and a calculation of the reaction rate for this line, which you will provide to the class. Use the combined reactions rates for the class to prepare a figure (either for wavelength or light intensity, depending on your group's activities) of reactions rates. **Photosynthesis (Postlab):** Complete the postlab activity in the handout before coming to the next lab.	___/10 ___/15 ___/10
7	**QUIZ 2** **Plant Cladistics (Matrix):** Complete the character state matrix on pp. 103-104 of your manual.	___/10 ___/5
8	****** NO LABS ******	
9	**LAB PRACTICAL 3** **Plant Cladistics (Tree):** Complete the data sheet on pp. 123-124 of your lab manual.	___/20 ___/5
10	**Spatial Relations (Prelab):** Complete the prelab activities detailed in the handout before coming to lab. **LAB PRACTICAL 4** **Spatial Relations (Data):** Prepare a statistical analysis and discussion of the results of each of the three spatial tests (pp. 147-148).	___/10 ___/20 ___/15
11	**QUIZ 3** **Population Ecology (Prelab):** *Population Ecology Prelab*, pp. 129-130. Complete the prelab assignment prior to coming to lab. **Population Ecology (Data):** Complete the data sheet provided on pp. 131-136. **Species Interactions (Planning):** Complete the planning exercise for your Species Interaction project on pp. 153-155. **Population Ecology (Postlab):** Complete the Maximum Sustainable Yield activity in the handout before the next lab.	___/10 ___/5 ___/5 ___/5 ___/10
12	****** NO LABS ******	
13	**Species Interactions (Prelab):** Read the assigned news article and answer questions in the handout before coming to lab. **QUIZ 4** **Species Interactions (Data Collection):** Complete the datasheet provided by your TA.	___/10 ___/10 ___/15

	Species Interactions (Postlab): Complete the postlab activity in the handout before coming to the next lab.	**___/10**
14	****** NO LABS ******	
15	**Biodiversity (Prelab):** Complete the prelab assignment on p. 163 prior to coming to lab. **Biodiversity:** Complete the data sheet on pages 165-168 in your lab manual.	**___/5** **___/10**
	TOTAL POINTS:	**___/295**

HEALTH WARNINGS: SWINE FLU

Fall 2009 SEMESTER

As you are no doubt aware, the modified H1N1 virus, commonly called the swine flu, is already widespread and reaching pandemic status. Experts predict it will have a significant impact by the end of September, well before the typical flu season. We must all be prepared for this during this fall semester. Basic symptoms of the disease can be found at: http://pediatrics.about.com/od/swineflu/a/409_symptoms.htm. Basically the symptoms are similar to other flu but with additional gastrointestinal difficulties.

The University has set up a swine flu page to keep you informed at: http://www.ehs.ufl.edu/h1n1/students.asp .

Essential to controlling the spread of this virus is that people that believe they may be infected do not try to go to class and remain home until their fever has broken. *If your instructor determines that you are possibly infected, you will be asked to leave the lab*. So that those who become sick do not get penalized, the BSC lab program suspend its Lab Admit policies (published in your lab manual), will not require documentation of illness, nor penalize students that miss their labs this semester. Your TA will provide means of making up work that you miss due to illness.

BSC LABORATORY SAFETY

Work in the Biology laboratory may expose students to **inherently dangerous activities**. Students in the BSC laboratories may be exposed to chemicals (e.g., formaldehyde, organic solvents, acids, and other caustic chemicals), chemical fumes, laboratory equipment and supplies (e.g., scalpels, razor blades, glass slides, coverslips, and electrical equipment), toxic or irritating properties of living and dead animals, and other materials necessary to laboratory activities. Other possible hazards include broken glass on the floor or counters, combustible materials, and slippery spills.

1. Smoking, eating, and drinking are expressly forbidden and NOT allowed in the laboratory.
2. Locate the placement of safety equipment and supplies in the laboratory: safety shower, eye wash station, fire extinguisher, and first aid kit. Memorize these locations. You should understand the use of this equipment. Also note the locations of exits. Each laboratory has a chemical exposure manual. These include material safety data sheets on all hazardous chemicals or compounds to which you might be exposed in the BSC laboratory.
3. Students should follow instructions carefully, especially when hazardous conditions occur or hazardous materials are being used.
4. Students should dress appropriately in the lab. Gloves and protective aprons will be made available in the labs. Students may elect to supply their own gloves and protective aprons or laboratory coats. Only shoes that provide complete foot covering are allowed in the lab.
5. You should be familiar with fire procedures. Leave the building immediately should a major fire occur or if the fire alarm sounds. Notify the appropriate authorities -- don't assume someone else remembered to do it. Meet with other students and your instructor outside the building before leaving so that an accurate headcount may be made.
6. The safe use of specific equipment and tools (e.g., microscopes, slides, scalpels, and pipettes) will be demonstrated by the instructor during the laboratory sessions. Be sure you understand this usage and ask questions if you do not.
7. Never pipette by mouth. Always use a suction bulb or pipette aid.
8. Notify your T.A. IMMEDIATELY of any spills, breakages, or equipment malfunction.
9. Students should report all hazardous conditions to the instructor immediately.
10. All organisms, living or dead, should be treated with care and respect. Avoid direct handling when possible.
11. Students should clean up any supplies used and should return materials where they belong as instructed. Any material spilled should be cleaned appropriately. Report any hazardous spills or breakages.
12. Broken glass and sharp metal waste should be placed only in those receptacles marked for such disposal -- do not put these materials in normal trash receptacles.
13. Work areas must be left clean and dry prior to leaving the lab. Chemicals and reagents must be returned to their proper places.
14. You should always wash your hands before leaving the laboratory, even if you have not knowingly come in contact with any chemicals or biological fluids.