BSC 1407 Introductory Biology II Laboratory Syllabus

Fall 2014

Instructor: Lauren Bailey

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Office Hours: Tuesday and Thursday Noon - 1:00 PM, or by appointment

Class Time: T: 1:00 pm – 3:50 pm

R: 1:00 pm – 3:50 pm

STC #205

Course Material Accessed at: www.bsc1407labs.weebly.com

Password for files: biology

Course Description: BSC 1407 Introductory Biology II laboratory is the second part of the freshman biology laboratory sequence. As such, skills and techniques learned in BSC 1406 Introductory Biology I lab will provide the background for this class. The lab exercises in this class focus on biology at the organismal level with an emphasis on physiology and the organ systems.

Laboratory Objectives:

1. Students will continue learning how to implement the scientific method.

The scientific method provides the framework for any research project. Lab exercises will initially consist of a problem or scenario. Students will develop their own hypothesis. They will then develop and perform methods to address their hypotheses. They will collect and interpret their results, and they will write lab reports to describe and discuss their findings.

2. Students will continue to learn to compile, organize, and interpret data using various statistical tools.

Data collection and analysis are fundamental skills for any biologist. As such, in the course of performing lab exercises students will collect data. The use of the computer lab will facilitate data analysis. Students will then interpret these results. Further, students will keep a detailed lab notebook throughout the lab course.

3. Students will become proficient at basic biological skills including use of biological tools.

Because freshmen biology labs provide the foundation for upper level performance, each lab class will have a portion dedicated to learning basic biological techniques. These include, but are not limited to, microscopy, aseptic techniques, and dissection. Students will integrate these skills when performing experiments.

4. Students will communicate the results of experiments through written lab reports and oral presentations.

As a biologist it is vital to learn to communicate effectively, both verbally and by written means. Students will write lab reports with the following sections (Abstract, Introduction, Methods, Results, Discussion, and Works Cited) for every lab exercise. Students will also present the results of one of their experiments via PowerPoint presentation. Further, students will also write a comprehensive research report.

5. Students will keep a laboratory notebook.

The laboratory notebook is one of the most important aspects to conducting any kind of research. Therefore, students will be required to keep a well organized laboratory notebook. All lab exercises, notes, handouts, and graded material should be kept in the notebook. Students are required to have their notebook at every lab class.

6. Students will learn to communicate using proper medical terminology.

Understanding how to use medical terminology correctly is vital for any student in the biological sciences as well as for those pursuing a career in the health sciences. Because of this, students will be a provided a list of common medical terms. Quizzes will be given at the beginning of every lab class over these terms, and understanding of terminology will also be assessed on the midterm and final exam.

Grading:

Attendance = 10%

Weekly lab reports = 15%

Notebook (check 1 = 50%, final check = 50%) = 10%

Quizzes = 10%

Research Paper = 15%

Presentation = 10%

Midterm Exam = 15%

Final Exam = 15%

Total = 100%

***Please take your lab grade seriously – it is worth 25% of your overall grade in lecture.

Attendance: Attendance is MANDATORY at all laboratories and will be taken at the beginning of every lab session by the instructor. Makeup work will be arranged only in the event of an EXCUSED absence (as defined by the Student's Guidebook or Undergraduate Catalog). Students are expected to arrive on time for lab; if students arrive after attendance has been taken they will be given a 70 for their daily Attendance grade. It is the student's responsibility to inform the instructor that they have arrived late; if they do not, a daily attendance grade of zero will be recorded and the student will be considered as having an unexcused absence. Any unexcused absences will result in a grade of zero for any lab skills performed or for all work pertaining to that lab class. If you have any questions please consult your instructor.

*Note: Due to University holidays, some lab classes may have to be rescheduled. Students are responsible for all work done in make-up labs. Failure to attend a make-up lab will result in grades of zero for attendance and all work relating to that lab.

Weekly lab reports: Weekly lab reports will be completed after performing the associated laboratory exercise. The weekly lab reports are due at the beginning of the next lab class—NO EXCEPTIONS. I DO NOT accept late work. Turn in your lab report, along with any other lab materials, stapled together please. Students will compose their own unique lab reports; any lab reports showing evidence of copying or plagiarism will be given a grade of zero. The lab report must contain the following: Abstract, Introduction, Methods, Results, Discussion, and Works Cited. All lab reports must be type-written with correct grammar and spelling. Failure to comply with this will result in points being deducted from your lab report grade. All typed work must be in the format listed below; failure to comply with the format will result in points being deducted.

12 point Times New Roman font

1 inch margins

Double spaced

Short title and page number at the top right of each page (excluding title page).

***Please properly cite all references on a separate page at the back of your paper.

Notebook: The laboratory notebook should be brought to every lab class. The notebook should be organized and should contain all lab class materials. One unannounced notebook check will occur during the semester. Students without their notebook will receive a zero. At the end of the semester an announced final notebook check will occur.

Quizzes: Quizzes will be given at the beginning of every lab class over that week's lab exercise and medical terms. To prepare for the quiz, read the lab exercise for that week and familiarize yourself with what we will be doing in lab that day.

Research Paper: Students will write a research paper based upon the comparative vertebrate dissection lab, due at the end of the semester. Research paper guidelines will be provided with the lab exercise. Failure to adhere to the guidelines will result in a loss of points on the paper. Any papers showing evidence of copying or plagiarism will be given a grade of zero.

Presentation: Each student will create and present to the class a PowerPoint presentation over a lab from this semester. The presentation must contain the following: Introduction, Methods, Results, Discussion, and Works Cited. Guidelines for the presentation will be provided. Any evidence of plagiarism will result in a grade of zero for the presentation.

Exams: Students will take a midterm and final exam. The midterm will consist of a laboratory practical and a written multiple choice exam; the final exam will be a comprehensive multiple choice exam.

Tentative Laboratory Schedule:

Lab Safety	Week of 8/25
Intro to Medical Terminology, Bananas and Evolution	Week of 9/1
Protozoa and Bacteria	Week of 9/8
Vertebrates	Week of 9/15
Vertebrates	Week of 9/22
Invertebrates	Week of 9/29
Invertebrates	Week of 10/6

Midterm Practical and Exam	Week of 10/13
Respiration	Week of 10/20
Endocrine System	Week of 10/27
Brain and the Senses	Week of 11/3
Electromyography, Research Paper Due	Week of 11/10
Presentations, Ecology and Animal Behavior	Week of 11/17
Thanksgiving Week (No Lab)	Week of 11/24
Final Exam	Week of 12/1

**Lab schedule is subject to change during the semester. I will announce changes as far in advance as possible.*

Dress Code: Only long pants and closed toe shoes may be worn in the laboratory. This means no shorts, skirts, or capris. Sandals, flip flops, and ballet flats are prohibited. You will be asked to leave the lab if you are not wearing appropriate attire. This is for your safety and the safety of others working in the lab.

***Additional note**--University policy prohibits food and drinks in the lab.

Obligatory Statements:

Disabilities — Students with Disabilities: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact: Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library, Room 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

StudentDisabilityServices@tamu-commerce.edu

Behavior — All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (See Student's Guide Handbook - Policies and Procedures; Conduct)

Plagiarism — Plagiarism is a criminal activity. You must cite all sources of information. Unreferenced copying of material, whether parts of sentences, whole sentences, paragraphs, or entire articles can result in a score of zero for your assignment and may result in further disciplinary action.

Early Intervention for First Year Students — Early intervention for freshmen is designed to communicate the University's interest in their success and a willingness to participate fully to help students accomplish their academic objectives. The university through faculty advisors and mentors will assist students who may be experiencing difficulty to focus on improvement and course completion. This process will allow students to be knowledgeable about their academic progress early in the semester and will provide faculty and staff with useful data for assisting students and enhancing retention. Grade reports will be mailed by the end of the sixth week of the semester