BSC 2010L – Integrated Principles of Biology Lab I

Syllabus for online course
Fall 2019 semester

I. Class Meetings

The entire course will be conducted online through the course Canvas website. You can directly access the Canvas login at https://elearning.ufl.edu/

II. BSC Lecture Courses

The BSC Online Lecture course (BSC 2010) is a separate course from the BSC Online Lab course.

III. Instructors

Professor:

Stefanie Gazda, Ph.D.
Stefanie.gazda@ufl.edu
Office Hours: Wed/Thur 9:30 -11:00 am and by appointment

Teaching Assistants:

TAs will be announced on Canvas at the start of the course.

Office hours will be held on online and via email. Please make an appointment for an in-person meeting.

IV. Course Goals and Objectives

The primary goal of this course is to establish a coherent foundation of knowledge in biology and to prepare students for comprehension in advanced biology courses and science in general. Fundamental concepts discussed include the scientific methods by which we come to know things in science, the chemical composition and processes that make up all life, genetic processes and the means of inheritance of traits, the mechanisms and processes of natural selection, and adaptation and evolution of life on Earth. An additional course goal is to develop critical thinking skills for development of reasoned thought and for evaluation of life experiences.

Objectives of the course will be achieved if, by its conclusion, students can:

- Describe a scientific hypothesis and identify testable predictions that logically follow
- Construct proper figures representing biological data, and interpret data represented in similar figures
- Understand the proper use and function of key types of laboratory equipment, such as microscopes, spectrophotometers, and gel electrophoresis arrays
- Understand the importance of statistics in scientific sampling, determine appropriate statistical tests for particular types of data, understand the meaning of statistical significance, interpret statistic results and draw appropriate conclusions from them
- Describe the relationship between genotype and phenotype and identify methods by which genotype can be determined
- Determine the mode of inheritance of genetic traits based on ratios of phenotypes
- Identify the primary organs of representative invertebrates and their associated functions
- Discuss the evidence that all living things are descended from a common ancestor
- Read, evaluate, and construct a phylogenetic tree

V. General Education Student Learning Outcomes

Biological science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the life sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern biological systems. Students will formulate empirically-testable hypotheses derived from the study of living things, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.

The General Education objectives and the associated Student Learning Outcomes for Biological Sciences are achieved through inquiry-based and active-learning exercises in the laboratory, including prelab assignments, experimental design, quizzes, oral presentations, and completion of weekly lab notes and data sheets. These exercises are designed to reinforce, augment, and accompany learning objectives in the companion BSC 2010 lecture course. In particular, the BSC 2010L lab exposes students to the development and testing of specific hypotheses, collection and presentation of biological data, and analysis of statistical significance.

VI. Expectations

Each student is solely responsible for reading and following the instructions, guidelines and schedules in this syllabus. **Not having read the information in this syllabus or in instructor announcements will not constitute an excuse for missing an assignment or other assessment.**

VII. E-mail Communication

All e-mail correspondence to course instructors must **originate from your ufl.edu account, have your full name in the body of the e-mail, and contain your course and section number in the subject line**. E-mails not meeting these requirements may not be recognized by our e-mail filters, and thus may not be answered. For the timeliest responses, use the Inbox Tool in Canvas.

VIII. Course Resources

A. Labster

Part of your assignments will be completed using Labster. They are simulations you will perform and answer questions about when you are finished. The cost is $25.00 for the semester. *Information on how to sign up will be posted on Canvas.*

B. Carolina Biological Supply

Part of your assignments will be completed using materials from Carolina.com. To order your kit, go to the BSC2010L Order Page (https://www.carolina.com/catalog/detail.jsp?prodId=581442). The code for the Carolina kit is 581442. The cost of the kit is $60.50 plus $9.95 shipping.

C. Course Website (e-Learning)

Class materials will be posted on the course *e-Learning* website (https://elearning.ufl.edu/). The course is found under “e-Learning in Canvas”. You are responsible for **all** announcements made in lecture and/or posted on the course website for this class. For help with e-Learning, call the UF Computing Help Desk at 352-392-4357, or visit the e-Learning support website: https://elearning.ufl.edu/

IX. Online Instruction Information

As part of BSC 2010L, you are required to complete online assignments. If at any time you have questions about these assignments, please contact the Online Instructor. A schedule will be posted on e-Learning with the due dates for each assignment. **All assignments must be completed by the stated due date and time for credit. Extensions will NOT be given because of technical or personal issues that occur within 24 hours of the assignment deadline.** Many assignments will also have a set time limit, so make sure you have time to devote to that assignment before you begin. You are expected to work by yourself on the assignments and cheating will not be tolerated. Note that all due dates for assignments are clearly posted on course website and reflect the most up-to-date information.

To facilitate actual discussion, a discussion page will set up in e-Learning in Canvas at the end of each Module. Any questions regarding the material or the online assignments should be posted there, so that your instructors, or your fellow students will be able to provide answers. Don't be shy about asking questions; after all, if you are confused about the material there will almost certainly be other students with the same questions.

Communication with Your Online Instructor:

When you have a question about the assignments, check the following sources first to see if it is already answered, **before** e-mailing your Online Instructor:

- Course Syllabus
- e-Learning Announcements (this is the primary means that your Online Instructor has to communicate with you in a timely manner)
- e-Learning Module Posts

If you still cannot find the answer to your questions:

- If it is a question that others might find useful to know the answer to as well, post it in the e-Learning Module discussion section.
- If it is a question specific to you (e.g. account or grade specific), e-mail your instructor. Barring unusual circumstances, expect a reply with 24 hours (48 hours on the weekends). E-mails and e-Learning Module posts are checked at least once per day, but sometimes not more than that.

X. Computing Requirements

It is the responsibility of the student to maintain a functioning computing system and internet connection. Computing/internet connectivity issues will NOT be acceptable excuses for missed deadlines unless they are brought to the attention of the instructor **at least 48 hours prior to the deadline** and accompanied by the ticket number from technical support. See Resources for Technical Support contact information

Microsoft Office programs are required for many of the assignments; it can be accessed by current UF students through GatorCloud.

XI. Assessments and Grading

Each lab will begin on a Sunday and close on the following Sunday. Some labs have a two week component, in which case each part will adhere to this schedule.

- *RealizeIt:* This lab course uses personalized adaptive learning in a software platform called RealizeIt at the beginning of three Modules. RealizeIt allows students to progress at their pace through a learning path that is created and adapted for each student throughout the course progression. Personalized adaptive learning engages with each student differently. Based on your interactions with the course, the system finds out how much you already know, decides what you need to learn, constructs your appropriate learning pathway and starts the learning cycle. The system continues to learn more about

you as you proceed on your learning pathway which is constantly being re-evaluated based on your continued participation. This allows the learning system to select the most appropriate content (text, video, charts, lecture, etc.) that helps you learn best and then constructs a specific lesson based on your learning preferences. All modules within RealizeIt will be posted inside Canvas, integrated with the study materials for that topic. To access, click the RealizeIt Integrated Module within your Canvas course and it will automatically open in a new window.

- *Pre-Lab Quizzes:* For labs without RealizeIt, there are pre-lab quizzes due on Wednesday at 11:59pm EDT/EST. All readings should be done prior to completing the pre-lab.
- *Lab Activities:* All lab activities must be completed/turned in by Sunday at 11:59pm. If it is a two week long lab, then only the part assigned for that week will be due. If a post-lab activity is assigned, it is due at the same time as the lab activities.
- *Participation:* Some labs require you to discuss answers in groups. You must adhere to the netiquette polices outlined in Canvas. There are rubrics for discussions, but keep in mind that posts should be 1) making educated initial posts about the topic and properly citing sources, and 2) providing constructive criticism and feedback for groupmates' posts.

Late work will not be accepted, unless there is written documentation from a doctor, the Dean of Student's Office, or due to a documented technical issue. If there is an issue with you completing your assignments on time, contact your instructor immediately. Do not wait until the last minute!

There are no make-ups available for assignments. Once assigned, assignments are available online at all times up until the deadlines. Because they are assigned well ahead of time, documentation of illness or a serious personal matter must be provided for at least five of the seven days of the week of the assignment's deadline for any accommodations to be made. It is especially important not to wait until just before the deadlines to complete assignments. A computer problem happening just before the deadline is not a valid excuse for not completing the assignment. If there is a technical problem with accessing the website or a particular assignment within *CANVAS*, you must contact *eLearning* technical support and the online instructor at least 48 hours prior to the deadline, so appropriate steps can be taken to fix the issue and appropriate extensions can be given if necessary. (Thus, check early that you can access the assignments. You will not be granted an extension for technical problems, if you do not contact the online instructor before the deadline.) It is best to get your assignments done at least two days early. It is your responsibility to have and maintain all the equipment and services necessary to participate in an online course.

Repeated for emphasis: technical problems must be reported to the online instructor at least 48 hours prior to the submission deadline, no exceptions!

XII. Schedule and Grading

Module	Topic	Start Date	End Date
0	Course Orientation	August 20	September 8
1	Scientific Inference	August 25	September 8
2	Enzyme Kinetics (Labster)	September 8	September 15
3	Yeast Fermentation (Labster)	September 15	September 22
4	Salamander Speciation	September 22	September 29
5	Inheritance - Week 1 (Carolina Biological)	September 29	October 6
5	Inheritance - Week 2 (Carolina Biological)	September 29	October 13
6	Experimental Genetics	October 13	October 20

7	Biotechnology (Labster)	October 22	October 27
8	Evolution (Labster)	October 27	November 3
9	Natural Selection (Carolina Biological)	November 3	November 10
10	Population Genetics	November 10	November 17
11	Cladistics	November 17	November 24

Grading Scale: Each Module gives equal weight to your grade (each is worth roughly 9.1% of your grade).

Special Treatment: Please do not request individual special treatment regarding grading at the end of the semester; **we do not adjust grades for individuals for any reason**. Plan to do well on all assessments from the beginning of the semester; if you are having difficulty in the class, please let your instructors know *sooner* rather than later.

Minimum grade cutoffs are listed to the right. The scores for the course as a whole will not be curved (i.e. these grade cutoffs will not be lowered) except under extremely rare circumstances (i.e., unless we tell you otherwise these cutoffs will not be lowered, so do not ask). However, these cutoffs will not be raised; in other words, if you receive 90% of the possible points, you are guaranteed to earn an A- grade. Final scores will NOT be rounded (i.e., 89.99% is not 90%). Note that the current UF policy for assigning grade points is available at the following undergraduate catalog web page: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Letter Grade	Point Range
A	≥ 94.0%
A-	≥ 90.0%
B+	≥ 87.0%
B	≥ 84.0%
B-	≥ 80.0%
C+	≥ 77.0%
C	≥ 74.0%
C-	≥ 70.0%
D+	≥ 67.0%
D	≥ 64.0%
D-	≥ 61.0%
F	≤ 60.9%

XIII. Attendance

Students are expected check the course website regularly for announcements, assignment due dates, and other course related information. Students are to complete all assigned work by the due date. Students are strongly encouraged to read the assigned chapters before attempting any of the assignments as this will make it easier to comprehend the material.

XIV. Academic Honesty

All students registered at the University of Florida have agreed to comply with the following statement:

"I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University."

In addition, on all work submitted for credit the following pledge is either required or implied:

"*On my honor I have neither given nor received unauthorized aid in doing this assignment*."

Cases of plagiarism or other academic dishonesty will not be tolerated, and may result in grade penalties or other sanctions. In this course, academic dishonesty includes (but is not limited to) collaborating with other students on course assignments, discussing quiz questions or answers with other students, giving other students the password for locked quizzes, and plagiarism. If you have knowledge of any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to http://flexible.dce.ufl.edu/media/flexibledceufledu/documents/uf_policy_student_conduct.pdf

Plagiarism is also a violation of the Academic Honesty Policy, and will be treated as such, resulting in grade penalties or other sanctions. Please review http://gethelp.library.upenn.edu/guides/engineering/ee/plagiarize.html.

XV. Conduct in Class

Please review the "**Netiquette guide"** for online courses in the "*Start here*" section on the course website.

XVI. Accommodations for Students with Disabilities

Students who will require a classroom accommodation for a disability must contact the Dean of Students Office of Disability Resources, in Peabody 202 (phone: 352-392-1261). Please see the University of Florida Disability Resources website for more information at: http://www.dso.ufl.edu/drc/. Note that the student should provide documentation of a requirement for accommodation **by the second week of classes**. No accommodations are available to students who lack this documentation. It is the policy of the University of Florida that the student, not the instructor, is responsible for arranging accommodations when needed. Once notification is complete, the Dean of Students Office of Disability Resources will work with the instructor to accommodate the student.

XVII. Counseling Center

Many students experience test anxiety and other stress related problems. "A Self Help Guide for Students" as well as a diverse array of support systems are available through the UF Counseling and Wellness Center (3190 Radio Road, 392-1575, http://www.counsel.ufl.edu/).

XVIII. Course Evaluation

To improve the teaching and learning of this important course, students are required to submit a teaching evaluation for each instructor electronically.

Evaluations are stored and reported in a completely anonymous manner. Authentication for evaluation submission is only to ensure that only one evaluation is submitted per student per instructor.

XIV. Other Information

Drop/Add/Withdrawal: A student can drop/add during the drop/add period with no penalty. After drop/add, a student who drops will receive a W until the date listed in the academic calendar. After that date, the student may be assigned an "E" (fail). Note: it is the responsibility of the STUDENT to withdraw from a course, not the instructor. Failure to participate/complete the class does NOT constitute a drop.

Course Evaluations: Anonymous course evaluations will be open via UF's online evaluations system near the end of the semester; you will receive e-mail notification of when the evaluations open. We do take student feedback into account when planning future semesters; please let your instructors know if there are particular modules and/or activities that you found helpful or that you would have liked to cover in more depth, as well as any that you found less useful.