

# Integrated Principles of Biology 1 Lab Syllabus – Fall 2020

BSC2010L ONLINE ONLY

## I. INSTRUCTOR INFORMATION

### Professor:

Stefanie Gazda, Ph.D.

Email: [stefanie.gazda@ufl.edu](mailto:stefanie.gazda@ufl.edu)

Office Hours: Thursdays from 1:30 to 3:30 pm  
and by appointment online.

### Teaching Assistants:

TAs (and their Office Hours) will be posted in  
Canvas by the start of the course.

*Office hours will be held via Zoom*

## II. COURSE INFORMATION

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

## COURSE 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 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.

## COURSE TEXTBOOK

This course will use an OpenStax textbook that is available for free to view or download.

Clark, M. A., Douglas, M., & Choi, J. (2018). *Biology* (2nd ed.). OpenStax. Retrieved from <https://openstax.org/details/books/biology-2e>

# COURSE SUPPLIES

You will need the following materials for this course.

## Labster Simulations

There are four Labster virtual lab simulation assignments in this course. The Labster simulation assignments will include a link that will open a new tab with the virtual lab. There is **NO COST** to use Labster this semester.

Please use Google Chrome or Mozilla Firefox web browsers when accessing Labster simulation assignments. To run Labster simulations, check to make sure your computer meets the [minimum system requirements for Labster simulations](#).

**Note: Labster simulations do not run on mobile devices such as smartphones and tablets.**

## Carolina Biological Kits

Part of your assignments will be completed using materials from Carolina Biological kits. Information on how to order these kits will be posted on Canvas. Do not attempt to find the link for the kit for this lab on your own! You are required to have the kits by the third week of the semester. No extensions will be granted if you cannot get the kits in time to start the lab.

## Additional Items Needed for Labs

### **For Lab 5, you will need:**

1. Potting soil *ca.* 6 cups
2. Tap water
3. Fluorescent light source
4. Pencil x 1
5. Scissors x 1
6. Tablespoon x 1

### **For Lab 9, you will need:**

1. Water, nonchlorinated (bottled spring water or distilled water)
2. Non-iodized table salt (sodium chloride), 5 g
3. Transparent tape
4. Measuring spoon
5. Spoon (for mixing)
6. Large plastic container, such as a bucket or dishpan

7. Graph paper or graphing software

## COURSE DESCRIPTION

Laboratory experiments are designed to accompany BSC 2010. The BSC Online Lab course (BSC 2010L) is a separate course from the BSC Online Lecture course (BSC 2010).

## PREREQUISITE KNOWLEDGE AND SKILLS

Degree-seeking students only. Corequisite: BSC 2010 or the equivalent.

## MINIMUM TECHNICAL SKILLS

To complete your tasks in this course, you will need a basic understanding of how to operate a computer, and how to use word processing software.

## 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 the development of reasoned thought and for evaluation of life experiences.

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

1. Create a scientific hypothesis and identify testable predictions that logically follow.
2. Construct proper figures representing biological data, and interpret data represented in similar figures.
3. Examine the proper use and function of key types of laboratory equipment, such as microscopes, spectrophotometers, and gel electrophoresis arrays.
4. Examine 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.
5. Differentiate the relationship between genotype and phenotype and identify methods by which genotype can be determined.
6. Determine the mode of inheritance of genetic traits based on ratios of phenotypes.
7. Identify the primary organs of representative invertebrates and their associated functions.

8. Discuss the evidence that all living things are descended from a common ancestor.
9. Read, evaluate, and construct a phylogenetic tree.

## 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.

## COURSE 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.

## III. COURSE POLICIES

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. No credit will be given for assignments completed after the deadline. Extensions will NOT be given because of technical or personal issues that occur within 24 hours of the assignment deadline. Many assignments may take several days to complete, 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 the course website and reflect the most up-to-date information.

## ATTENDANCE

Students are expected to check the Canvas course regularly for announcements, assignment due dates, and other course-related information. Students are to complete all assigned work (quizzes, activities, and discussions) by the due dates. 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.

## TIME COMMITMENT

The UF College of Liberal Arts and Sciences assumes that each student will devote 3-4 hours per week per credit-hour to each course, including time in lectures and labs. Because BSC 2011L is 1 credit, each student should therefore expect to devote 3-4 hours per week to this course during a regular semester. A recommended time allocation is in the table. If you find yourself spending more than the recommended number of hours per week on average on these activities, discuss this with your course instructor to see if you can refine your study habits. If you find yourself spending less than the recommended number of hours per week on average, you should recognize that you may have difficulty learning and comprehending the material in this time, and this will probably be reflected in poor performance on the various assessments, causing you to receive a lower overall course grade.

Activity	Hours/Week
Readings	1
Lab Activities	2-3

## 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 Lab Q&A 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 Lab Q&A section at the end of the Module in question.
- 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 weekends; do not expect an immediate response in the evenings). E-mails and e-Learning Discussion posts are checked at least once per day, but sometimes not more than that.

## COURSE ACTIVITIES AND MATERIALS

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 posted on the course website for this class. Each lab will begin on a Sunday and close on the following Sunday at 11:59 pm EDT/EST. Some labs have a two-week component, in which case each part will adhere to this schedule.

### Lab Readings

Lab background readings and manuals will be available in your Canvas course.

### Pre-Lab Quizzes

Pre-lab quizzes will be due on Wednesday at 11:59 pm EDT/EST. All readings should be done prior to completing the pre-lab quiz.

### Lab Activities and Discussions

All individual lab activities must be completed/turned in by Sunday at 11:59 pm EDT/EST. Discussion-related activities may have multiple due dates, please read the discussion description for more information. Due dates are set for the initial posts. If it is a two-week-long lab, then only the part assigned for that week will be due.

### Post-Labs

Post-lab quizzes are due on Sunday at 11:59 pm EDT/EST. All lab activities should be done prior to complete the post-lab.

### Lab Q&As

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:

- **e-Learning Announcements** (this is the primary means that your Online Instructor has to communicate with you in a timely manner)
- **Lab Q&A Discussion Boards**
  - In each lab, there is a Lab Q&A discussion board. This is where you can post questions to other students, the instructor, and to the TAs about that particular lab. 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.

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 on the e-Learning Lab Q&A discussion board.
- If it is a question specific to you (e.g. account or grade-specific), message your instructor. Barring unusual circumstances, expect a reply with 24 hours (48 hours on weekends).

E-mails and e-Learning discussion posts are checked at least once per day, but sometimes not more than that.

## Pre-Test and Post-Test

At the beginning and end of the semester you will take a pre-test and post-test assessment. This is a multiple-choice question test designed to evaluate your prior knowledge of Biology (pre-test) at the start of the semester and your acquired knowledge of Biology (post-test) at the end of the semester. You will be graded for completeness, not correctness. Please answer thoughtfully using only your current knowledge (do not use outside resources such as your textbook). Your answers are important as they will be used to analyze the course for gaps in teaching. Both assessments will be proctored using Honorlock.

## Research Study

This course is participating in an IRB-approved research study at the University of Florida. The study is called *Adaptive vs. traditional learning in higher education introductory biology courses*. You will be asked to participate in this study. **Your participation is voluntary, and you can decline to participate or withdraw consent at any time, with no consequences.**

The details of the study are provided in the Orientation Module in Canvas.

## COURSE GRADING

Assignment totals are subject to change at the discretion of the instructor. All grades will be posted on e-Learning, and it is the responsibility of the student to check their grades to make sure they are accurate. If there is a discrepancy, you must let us know within ONE week of the grade being posted on e-Learning.

Assignments	Percentages
Orientation	5%
Lab 1	8.5%
Lab 2	8.5%
Lab 3	8.5%
Lab 4	8.5%

Assignments	Percentages
Lab 5	10%
Lab 6	8.5%
Lab 7	8.5%
Lab 8	8.5%
Lab 9	8.5%
Lab 10	8.5%
Lab 11	8.5%
Research Study Assignments	2% (Extra Credit)

The minimum grade cutoffs are listed below. These cutoffs will not be raised; in other words, if you receive 94% 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%).

Point Range (%)	Letter Grade
≥ 94	A
≥ 90	A–
≥ 87	B+
≥ 84	B
≥ 80	B–
≥ 77	C+
≥ 74	C
≥ 70	C–

Note that the current UF policy for assigning grade points is available at the following undergraduate catalog web page: [Grades and Grading Policies](#).

## PARTICIPATION

Some labs require you to discuss answers in groups. You must adhere to the netiquette policies outlined below. There are rubrics for discussions, but keep in mind that posts should make educated initial posts about the topic and properly cite sources and provide constructive criticism and feedback for groupmates' posts.



## Netiquette

When posting on the Discussion Board in your online class, you should:

- Make posts that are on-topic and within the scope of the course material.
- Take your posts seriously and review and edit your posts before sending them.
- Be as brief as possible while still making a thorough comment.
- Always give proper credit when referencing or quoting another source.
- Be sure to read all messages in a thread before replying.
- Don't repeat someone else's post without adding something of your own to it.
- Avoid short, generic replies such as, "I agree." You should include why you agree or add to the previous point.
- Always be respectful of others' opinions even when they differ from your own.
- When you disagree with someone, you should express your differing opinion in a respectful, non-critical way.
- Do not make personal or insulting remarks.
- Be open-minded.

## COURSE TECHNOLOGY REQUIREMENTS

It is the responsibility of the student to maintain a functioning computing system and internet connection that can meet the minimum technical requirements of the course.

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.

## LATE WORK

Late work will not be accepted, unless there is written documentation from the Dean of Students Office (<https://care.dso.ufl.edu/instructor-notifications/>), 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!

## MAKE-UPS

There are no make-ups available for assignments. Once assigned, assignments are always available online 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!

## 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

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

## IV. UF POLICIES

UF Online students are bound by the same UF policies as on-campus students. Please read through this section in full.

### UNIVERSITY POLICY ON ACADEMIC CONDUCT

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and

integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The [Student Honor Code](#) specifies the number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

## ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://disability.ufl.edu/>) by providing appropriate documentation. Once registered, students will receive an accommodation letter that must be presented to the instructor when requesting an accommodation. 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. Accommodations are not retroactive.

## CLASS DEMEANOR OR NETIQUETTE

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions, and chats. Review the [Netiquette Guide for Online Courses](#) for expected student behavior.

## MINIMUM TECHNOLOGY REQUIREMENTS

The University of Florida expects students entering an online program to acquire computer hardware and software appropriate to his or her degree program. Most computers are capable of meeting the following general requirements. A student's computer configuration should include:

- Webcam
- Microphone
- Broadband connection to the Internet and related equipment (Cable/DSL modem)
- Microsoft Office Suite installed (provided by the university)

Individual colleges may have additional requirements or recommendations, which students should review prior to the start of their program.

## SOFTWARE USE

All faculty, staff, and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

## VIRTUAL CLASS SESSIONS

Our virtual class sessions, if any, may be audio-visually recorded for students in the class to refer back. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials are prohibited.

## V. TECHNOLOGIES

This course uses the following technologies.

### HONORLOCK

Honorlock is an online proctoring service that allows students to take exams on-demand 24/7. There are no scheduling requirements or fees.

You will need a laptop or desktop computer with a webcam, a microphone, and a photo ID. The webcam and microphone can be either integrated or external USB devices.

Honorlock requires that you use the [Google Chrome browser](#); furthermore, the Honorlock extension must be added to Chrome.

For further information, FAQs, and technical support, please visit [Honorlock](#).

### ZOOM

Zoom is an easy to use video conferencing service available to all UF students, faculty, and staff that allows for meetings of up to 100 participants.

You can find resources and help using Zoom at <https://ufl.zoom.us>.

## VI. GETTING HELP

Resources are available at [Distance Learning's Getting Help](#) for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should you have any complaints about your experience in this course, please visit [Distance Learning's Student Complaint Process](#) to submit a complaint.

College can be a very stressful time in a person's life. Resources are available on campus to help students meet academic goals and solve personal problems, which may interfere with their academic performance. If you find that you are having difficulty emotionally or academically, there is substantial support available. See "*A Self Help Guide for Students*" or contact one of the following services:

- UF Counseling and Wellness Center, Radio Rd Facility, 392-1575
- Dean of Students Office, 202 Peabody Hall, 392-1261
- Career Resource Center, Reitz Union, 392-1601
- CLAS Academic Advising Center, Farrior Hall, 100 Fletcher Drive, 392-1521
- UF Field and Fork Pantry, 564 Newell Dr., 294-3601

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live and believes this may affect their performance in the course, is urged to contact the Dean of Students (202 Peabody Hall, 392-1261) for support. Furthermore, please notify your instructor(s) if you are comfortable in doing so. This will enable us to provide any resources that we may possess.

## TECHNICAL DIFFICULTIES

For issues with technical difficulties for Canvas, please contact the UF Help Desk at <http://helpdesk.ufl.edu> or (352) 392-HELP (4357).

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from the Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

## HEALTH AND WELLNESS

- **U Matter, We Care:** If you or someone you know is in distress, please contact <mailto:umatter@ufl.edu>, 352-392-1575, or visit [umatter.ufl.edu](http://umatter.ufl.edu) to refer or report a concern and a team member will reach out to the student in distress.
- **Counseling and Wellness Center:** Visit [counseling.ufl.edu](http://counseling.ufl.edu) or call 352-392-1575 for information on crisis services as well as non-crisis services.
- **Student Health Care Center:** Call 352-392-1161 for 24/7 information to help you find the care you need, or visit [shcc.ufl.edu](http://shcc.ufl.edu).
- **University Police Department:** Visit [police.ufl.edu](http://police.ufl.edu) or call 352-392-1111 (or 9-1-1 for emergencies).
- **UF Health Shands Emergency Room/Trauma Center:** For immediate medical care in Gainesville, call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; [ufhealth.org/emergency-room-trauma-center](http://ufhealth.org/emergency-room-trauma-center).

## ACADEMIC AND STUDENT SUPPORT

- **Career Connections Center:** 352-392-1601. Career assistance and counseling services [career.ufl.edu/](http://career.ufl.edu/).
- **Library Support:** Various ways to receive assistance with respect to using the libraries or finding resources: [cms.uflib.ufl.edu/ask](http://cms.uflib.ufl.edu/ask)
- **Teaching Center:** 352-392-2010 General study skills and tutoring: [teachingcenter.ufl.edu/](http://teachingcenter.ufl.edu/)
- **Writing Studio:** 352-846-1138. Help brainstorming, formatting, and writing papers: [writing.ufl.edu/writing-studio/](http://writing.ufl.edu/writing-studio/)

## VII. PRIVACY AND ACCESSIBILITY POLICIES

For information about the privacy policies of the tools used in this course, see the links below:

Technology	Privacy Policy	Accessibility Policy/Statement
Instructure (Canvas)	<a href="#">Privacy Policy</a>	<a href="#">Accessibility</a>
Sonic Foundry (Mediasite Streaming Video Player)	<a href="#">Privacy Policy</a>	<a href="#">Accessibility</a>
Zoom	<a href="#">Privacy Policy</a>	<a href="#">Accessibility</a>

Technology	Privacy Policy	Accessibility Policy/Statement
YouTube (Google)	<a href="#">Privacy Policy</a>	<a href="#">Accessibility</a>
Microsoft	<a href="#">Privacy Policy</a>	<a href="#">Accessibility</a>
Adobe	<a href="#">Privacy Policy</a>	<a href="#">Accessibility</a>
Honorlock	<a href="#">Privacy Policy</a>	<a href="#">Accessibility</a>
OpenStax	<a href="#">Privacy Policy</a>	<a href="#">Accessibility</a>
Labster	<a href="#">Privacy Policy</a>	<a href="#">Accessibility</a>

## VIII. COURSE SCHEDULE

Lab	Start	End	Subject
0	8/31	9/6	Orientation (Complete to access Lab 1)
1	9/6	9/13	Scientific Inference
2	9/13	9/20	Enzyme Kinetics (Labster)
3	9/20	9/27	Yeast Fermentation (Labster)
4	9/27	10/4	Salamander Speciation
5	10/4	10/11	Inheritance - Week 1 ( <i>requires Carolina Biological</i> )
5	10/11	10/18	Inheritance - Week 2 ( <i>requires Carolina Biological</i> )
6	10/18	10/25	Experimental Genetics
7	10/25	11/1	Biotechnology (Labster)
8	11/1	11/8	Evolution (Labster)
9	11/8	11/15	Natural Selection ( <i>requires Carolina Biological</i> )
10	11/15	11/22	Population Genetics
11	11/29	12/6	Cladistics/Systematics

## VIV. DISCLAIMER

This syllabus represents the instructor's current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.