# BSC 2010LV – General Biology I Virtual Lab

Course Reference #: BSC 2010L -V- ___  ___  ___

FALL 2021

## COURSE DESCRIPTION:

This is the lab component for BSC-2010. Lab experiences include cell structure and function, cell metabolism, cell reproduction and inheritance, genetics and evolution.

## Prerequisites:

Students must score into college-level reading on the placement test.

## Corequisites:

BSC2010 Lecture must be taken during the same semester as the laboratory.

## COURSE RATIONALE:

BSC2010L focuses on the fundamental knowledge and application of basic biological laboratory techniques. Through several virtual lab simulations, learners will practice general lab techniques and complete activities applying general biology knowledge through a virtual setting. Mastering both the knowledge presented in this course and completing the virtual simulations will help to prepare the learner with a sound approach and understanding of general biology theories and techniques. Students will learn major biological concepts and apply them in virtual simulation settings to enhance understanding of key concepts and introduce lab technology and techniques. Students will apply critical thinking skills to provide the foundation for lifelong learning and career development.

## COURSE LEARNING OBJECTIVES:

At the completion of this course, the student will be able to:

- Identify the steps of the scientific method and characteristics of a sound experiment
- Identify structures in the animal cell and plant cell
- Interpret data on enzyme structure and cellular respiration
- Identify stages of meiosis and mitosis
- Predict inheritance of genes through generations
- Use an understanding of genetics to analyze animal genes
- Analyze genetic relationships through taxonomic trees

## REQUIRED MATERIALS:

As this is an online course, it is expected enrolled students will have a working computer and access to the internet. Additionally, the Application used below may have specific requirements.

- Labster App Virtual Access code
    - Contact the IRSC bookstore to purchase at: https://www.bookstore.irsc.edu
    - Minimum computer specifications to run Labster:

    · **Processor:** Dual core 2 GHz or higher

    · **Memory:** 4 GB or more

    · **Graphic card:** Intel HD 3000 / GeForce 6800 GT / Radeon X700 or higher

    · **OS:** Latest version of Windows (64-bit) or Mac OS or ChromeOS

    · **Supported browsers:** Latest version of Firefox and Chrome

    · A **stable** internet Connection

    · A **camera**

    · A **microphone**

    **NOTE: iPads, smart phones, and tablets will not load or run Labster**

- Openstax Biology – this is an open resource book.  You do not have to pay to download a PDF, just follow this link: https://openstax.org/details/biology

## TENTATIVE SCHEDULE:

The course schedule with associated assignments will be located in the **'Schedule of Activities'** in the course control panel in Blackboard. Please see the **'Schedule of Activities'** for specific assignments and due dates.  Below is a *tentative outline* of activities. Assignments and due dates may be changed with advanced notice via Blackboard announcements and Rivermail.

| Dates: | Lab Topic |
|---|---|
| **Week 1** | Prep for Lab, Register for Labster, Take Start Here Quiz, Labster Demo |
| **Weeks 2/3** | Microscopy, Cell Structure, Experimental Design |
| **Week 4** | Practical 1 |
| **Weeks 5/6** | Enzymes |
| **Weeks 7/8** | Respiration and Fermentation, Cell Membrane and Transport |
| **Week 9** | Practical 2 |
| **Weeks 10/11** | Cell Division, Animal Genetics |
| **Weeks 12/13** | Mendelian Genetics, Evolution |
| **Week 14** | Practical 3 *(Winter Break – no in person class)* |
| **Week 15** | Final Practical Exam |

## CONTACT INFORMATION:

When questions arise during this course, please remember to check these three sources for an answer:

1. Course Syllabus
2. Schedule of Activities
3. Announcements in Blackboard
4. The "Ask the Instructor" discussion board

If you cannot find an answer to your question AND the question and answer would benefit the entire class, please post your question to the "Ask the Instructor" discussion board. Posts on this discussion board can have replies from fellow students who may have the same question or know the answer and answers by the instructor. You are encouraged to answer questions from other students in the discussion forum when you know the answer to a question to help provide timely assistance.

If you have questions of a personal nature such as relating a personal emergency, questioning a grade on an assignment, or something else that needs to be communicated privately, please contact the instructor via email and/or Course Messages.  Please allow 24/48 hours for the instructor to respond.  You can find your instructors email and contact information on Blackboard and the Biology Weebly site:

**Biology Faculty: http://biology-irsc.weebly.com/full-time-faculty---websites-and-office-information.html**

**Adjunct Factulty: http://biology-irsc.weebly.com/find-adjunct-faculty-and-tlss.html**

**Technical Lab Specialist (TLS): http://biology-irsc.weebly.com/find-adjunct-faculty-and-tlss.html**

| Instructor of Record, IOR: |
|---|
| **Email:** |

On Day 1 of your lab class, your Instructor will introduce themselves as the **Instructor of Record (IOR)** for this course. **Please write their name and contact information above** (both can also be found with the links provided).  The IOR is responsible for the selection of experiments and exams developed and approved by Biology Department Faculty, approves all assignments, and assigns the student's grade for the course. In addition to the IOR, a **Technical Lab Specialist (TLS)** *may* also assigned to this course.  The role of the **TLS** is to facilitate the performance of the assigned experiments within the laboratory setting. The **TLS** also assists with the grading of assessments under the direction of the course instructor and other biology faculty. If you have any questions or concerns, please first try to work with the course **TLS/IOR**. If the issue cannot be resolved, Lab Coordinator Sarah Rodgers (772-462-7149, srodgers@irsc.edu) is also available to assist. Any correspondence must include the **student's name** and **course reference number**. The IOR/TLS/Coordinator will generally respond to the student within 2 business days *(note: failure to include **name** and **reference number** in initial correspondence, may result in delayed to no response)*.The IOR reports the grade the student earns over the course of the semester and will issue any incompletes (I) or withdrawals (W) that are needed.

## GRADES:

Pre-lab quizzes, Labster quizzes, and online practical exams will be used to determine your final course grade. Remember, you earn your grade; your Instructor does give it to you. The work for the course has been broken down per category. Blackboard automatically calculates your grade based on the average score you earned per category (see below) and your overall grade is a running score and updated continuously throughout the semester.

The final course grades are based on the following categories totaling 600 points:

- 100 pts. - Average of Pre-lab quizzes
- 100 pts.- Average of Labster Virtual Simulation quizzes
- 400 pts. – (4) Practical Exams @ 100 pts. each (3 Unit, 1 Cumulative Final)

Course grades are assigned on the following basis:

**A:** 90% - 100%

**B:** 80% -  89%

**C:** 70% -  79%

**D:** 60% -  69%

**F:** below 60%

Students must continually complete assignments/exams over the semester. It is the student's responsibility to be aware of all due dates. All online assessments are due at the time posted. It is your responsibility to complete the work on time and submit it.  Remember all electronic communication is time stamped.  Please review the make-up and late policy posted below.

Grades will be posted on Blackboard, but technical and human errors may not reflect the true grade in Blackboard. Instructors reserve the right to manually calculate grades to verify the blackboard grades. It is the student's responsibility to monitor their grade and to approach the instructor if any grade discrepancy is noted within Blackboard. **Instructor contact must be administered promptly**, as last-minute concerns cannot always be addressed or remedied.

W = Student Withdraw deadline: Monday, October 25th.  Please contact the instructor before withdrawing.

I = An incomplete for passing students is only given in EXTREME cases. Students must be passing the course, the incomplete *must be approved by the IOR*, and are only given on a case by case basis.

If a student withdraws from the course, the student must email both the TLS and IOR.  **A "W" is submitted through students and their advisors. The IOR will respond with a confirmatory email that the student has been withdrawn once the workday process is complete.**  Requests for Instructor Withdrawal (WI) after the student has taken the final exam are prohibited. If you are concerned about your grade and the Student Withdrawal date has passed, then you need to discuss "WI" with your Instructor before taking the final exam.

# ASSESSMENT POLICIES:

Students are responsible for knowing their exact dates and times of their assessments as listed in the **Schedule of Activities!!** Assignments and due dates may be changed with advance notice via Blackboard announcements and Rivermail. Please review the following policies for each type of assessment.

**Pre-lab quizzes:** Each Laboratory Simulation has a pre-lab quiz associated with it. These quizzes contain background information pertaining to the Laboratory Simulation. These quizzes should be completed before performing the virtual Simulation. The quiz is timed and has 3 attempts (highest grade attempted before the due date is logged as your score). No late work accepted. No pre-lab quizzes can be dropped from Grade Center.

**Labster Virtual Laboratory Simulations:** Each weekly subject has one virtual laboratory simulations. To access the Labster labs, please use the links posted on Blackboard. The simulations must be completed by the due dates. Simulations are untimed, can be paused and saved. Your best attempt before the weekly due date is logged as your score, but you can repeat the simulations multiple times to go back over the information and access the Theory tabs after the due date. These simulations will give you multiple choice quiz questions as you progress through the simulation. To easily answer all the quiz questions, please check the Theory tab within the simulation.

**Practical Exams:** Students are responsible for knowing the exact dates and times of the Lab Exams listed in the **Schedule of Activities**. These Lab Practical Exams are set to open and close at specific times, thus any late submissions will NOT be allowed, *regardless if it is 10 seconds past Due Date/Time*, **so plan accordingly**. This is to ensure all students have fair and equal testing experience. Lab Exams will be **timed** Practical exams, in which the students will view parts of the simulations they completed in the labs prior or will be asked general knowledge questions about the theories behind the simulations. Students will not be able to return to a question and the questions are timed (so you are not able to Google or look-up answers as you will run out of time). Just like a Face-to-Face Lab Practical Exams, you will need to know the material by memory to be able to complete the exam during the time allotted. The 2nd and 3rd Unit exams will be virtually proctored through the Honorlock proctoring system. The Final Exam is cumulative and covers all concepts learned throughout the semester.

# LATE SUBMISSION POLICY:

Late work is not permitted. This course is organized so you have plenty of time to complete each weekly unit. It is YOUR RESPONSIBILITY to manage your time so that work is submitted on time. It is strongly advised that most work is completed before the day it is due IN CASE you experience loss of computer or internet and/or experience software issues that prohibit you from finishing the work on time. *Schedule your work, activities, and personal needs around the Schedule of Activities Dates as there is no flexibility to "catch-up" as labs are changed (or locked) weekly and cannot be "set-up" again.*

## MAKE-UP POLICY:

All assessments are open for multiple days. Therefore, there are no make-ups allowed. Work not completed will receive less than 100% (grade determined by amount completed). Any work not started will receive a zero grade.

If awarded an Incomplete "I", the student and the faculty must arrange a time frame to complete all missing work during the next sequential semester. A document with due dates for missed work will be generated by the instructor and agreed upon by the student. If any of these due dates are missed, a zero will be assigned as the grade for the assessment.

## ATTENDANCE:

**Beginning of the Term Attendance Verification.** IRSC requires instructors to mark student attendance at the beginning of the term for financial aid purposes. To be marked as attending the course, students must take the Start Here quiz and score over a 70% on it AND make an entry into the Student Introduction discussion board. Failure to complete either of these tasks by this date will cause the student to be marked as non-attending and they will be automatically dropped.

**Weekly Attendance.** Attendance via logging into Blackboard at least once per week is mandatory. Students who do not frequently log into Blackboard and access material typically will miss due dates and perform worse in the course.

## EXTRA CREDIT:

No extra credit is given.

## CHEATING/PLAIGURISM:

Cheating of ANY kind **WILL NOT** be tolerated by this Department or the College. _Anyone caught cheating will automatically receive a minimum of a zero for that assignment/test._ Any further episodes will result in an F in the class. Anyone who witnesses this inexcusable behavior and does not report it is also considered to be guilty of improper conduct. Examples of cheating include, but are not limited to, taking photos and screenshots of assessments and exams and sharing images with others and the internet, taking the exam next to a classmate and discussing and sharing questions and answers, and copying your assignment answers word for word from a peer, past student, textbook, or the internet. Post-lab quizzes and practical exams must be taken individually. Group efforts will be considered cheating.

Additionally, all electronic communication devices are prohibited during Practical Exams. The only electronic device in hands reach should be the device you are taking the exam with. Your practicals will be virtually proctored (or proctored in the assessment center when open). Additional information on virtual proctoring can be found on Blackboard. During exams, any student who uses a cell phone to make or answer a call, or send and/or read text messages or emails during one of these sessions may be asked to leave, and if testing will be considered cheating (see details below). Cell phones must be set on _silent_ or _off_ during any Collaborate live discussion session (unless using it for the session).

Please review IRSC's policy on Plagiarism: https://irsc.libguides.com/copyright/plagiarism. This course follows the same policy. Plagiarism on an assignment is subject to a zero grade.

## TECHICAL REQUIREMENTS FOR ONLINE COURSES:

1. **IRSC RiverMail:**

   Students must be able to log into IRSC's email system, RiverMail, every 48 hours (or two days) to see if there are updates regarding your course. You can forward your RiverMail to any other mail system, but YOU are responsible for this system to be reliable. Failure to check your email may result in missed information essential to your course success.

2. **IRSC Computer Requirements:**

   Students must have a reliable computer and an Internet connection throughout the course, **with a microphone and camera for Honorlock proctoring of the Final Practical**.

   For Exam testing, students will be instructed to download Honorlock, an online proctoring service and have a valid photo id. Information on Honorlock can be found at https://www.irsc.edu/admissions/honorlock.html  and details will be provided in the course.

3. **Blackboard Learning Management System (LMS):**

   The entire course is constructed within the students Blackboard course shell, thus students should expect to spend a significant amount of time each week within this system.

   *Blackboard LOG IN:*

   *USERNAME: Student ID number (no dashes)*

   *PASSWORD: IRSC web registration/pay pin*

   Blackboard preferred browsers are Google Chrome and Mozilla Firefox.

   If you need assistance with Blackboard, please review the Blackboard Help Videos by clicking on the link provided on the course menu.

   Technical Support: If you can't find your answer within the Blackboard Help Videos section, visit the Blackboard Help Center or call 772-462-7480 or email the help desk at  helpdesk@irsc.edu

## ADDITIONAL STUDENT RESOURCES:

**Biology website:** http://biology-irsc.weebly.com is a resource that list Biology faculty, instructor, and staff contacts, provides information on all offered courses, lists information on both the AA and BS guided pathways as well as other information.

**Library**: The Miley Library serves as IRSC's main library. A library is an information place providing professional assistance, library books and media, and access to the library's electronic resources. Each branch campus also has a library. Additionally, there is an extensive online database system also available through IRSC's website as well as useful libguides on plagiarism, citations, and more. https://irsc.libguides.com/c.php?g=824505 and www.irsc.edu

**Tutoring:** If the student is not earning the grade, they desire then it is the <u>student's responsibility</u> to contact the instructor for academic support/suggestions. In addition to receiving instructor help, please utilize the following services. Tutoring is provided by the IRSC ASCs. It's free! The ASC has also made virtual tutoring. https://irsc-asc.weebly.com/ Additionally, you can receive tutoring through the "SmartThinking" link on Blackboard. Use it!

## STUDENT ACCESSABILITY SERVICES:

Indian River State College provides reasonable accommodations to students with documented disabilities through the Student Accessibility Services (SAS) Office. The rights of students with disabilities which pertain to post-secondary education are provided under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. Students who wish to request an accommodation for a documented disability may contact Student Accessibility Services at 772-462-7808, 772-462-7782 or e-mail accessibilityservices@irsc.edu. The ***Student is responsible to inform the instructor at the beginning of the semester*** so lab managers, staff, and the instructor have ample time to prepare any testing accommodations that will be needed.

## NON-DISCRIMINATION AND HARRASSMENT POLICY:

Indian River State College and its faculty are committed to supporting our students and seeking an environment that is free of bias, discrimination, and harassment. IRSC does not discriminate on the basis of race, color, national origin, ethnicity, sex (pregnancy), religion, age, disability, sexual orientation, marital status, veteran status, or genetic information in its programs and activities. If you have encountered any form of discrimination or harassment, including sexual misconduct (e.g. sexual assault, sexual harassment, stalking, and domestic or dating violence), we encourage you to report this to the Title IX Coordinator. If you report such an incident of misconduct to a faculty member, that faculty member is required by law to notify the IRSC Title IX Coordinator. The following person has been designated to handle inquiries regarding non-discrimination and non-harassment policies: Adriene B. Jefferson, Equity Officer, and Title IX Coordinator, 3209 Virginia Avenue, Fort Pierce, FL 34987; IRSC Main Campus, W Building, Room 207; (772)462-7156; ajeffers@irsc.edu.

## STATEMENT TO STUDENTS:

If you are having trouble in your course, **your first obligation is to work directly with your instructor to resolve the issue**. If you are unable to settle your concerns with the assistance of your instructor, you should contact your Instructor of Record (IOR). If issues are not addressed, you may contact the Department Chair (Dr. Robin Willoughby, 462-7498), or the Assistant Dean (Dr. Anthony Dribben, 462-7503) who will assist you or advise you and if necessary help you contact the Vice President (Dr. Heather Belmont, Vice President of Academic Affairs, 462-7215).

## SYLLABUS DISCLAIMER:

**Syllabus Disclaimer:** The instructor views the course syllabus as an educational contract between the instructor and students. Every effort will be made to avoid changing the course schedule, but the possibility exists that unforeseen events will make syllabus changes necessary. The instructor reserves the right to make changes to the syllabus as deemed necessary. Students will be notified promptly of any syllabus changes in the course Announcements or course e-mail.