

# BSC1005 – Biological Science – Fall 2024



**Instructor:** Joshua Castro, Professor of Biology  
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**URL:** <http://frontdoor.valenciacollege.edu/>

**Class Website:** As this is a mixed-mode course, all of your course materials are accessible through Canvas at <https://online.valenciacollege.edu/login/canvas>  
If this is your first time taking a web-assisted course go to:  
<http://valenciacollege.edu/oit/learning-technology-services/student-resources/getting-started-online/> to help you logon and familiarize you with the system.

**Meeting Times:** We meet onsite Tuesdays, 10:00 AM – 11:15 AM. Building: Criminal Justice Institute – Public Safety Building 1 (CJI-PSB 1). Room: 225

**Course Description:** Welcome to the BSC1005 Biological Science course! This mixed-mode course is an introduction to essential principles of biological science. Topics include, but are not limited to, the nature of science and the scientific method, chemistry for biology, cell structure, metabolism, reproduction and genetics, organisms, evolution theory, and classification of organisms.

## Learning Objectives:

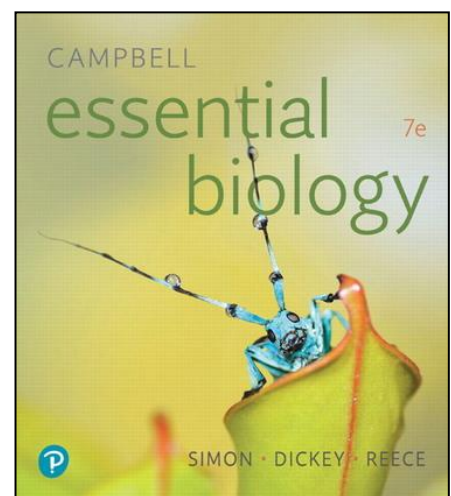
By the end of the course you will be able to:

1. Demonstrate competency in the application of critical thinking and scientific reasoning.
2. Differentiate between living and non-living entities.
3. Identify levels of organization within and between organisms.
4. Describe the structure and function of living organisms.
5. Describe cells, genetics, evolution, biodiversity, and ecology.

**Text:** We will be using *Campbell Essential Biology* by E.J. Simon, J.L. Dickey, J.B. Reece, and K.A. Hogan (Seventh Edition). This course requires **MasteringBiology** from Pearson. You can find this in the Valencia College bookstore or purchase direct from Pearson (select MasteringBiology with eText Access from Pearson within our Canvas course).

Short on cash for a couple of weeks? You can do a 2-week trial with to get started. Click on "Start my Free Trial."

**IMPORTANT:** *You MUST purchase the textbook through one of these options to receive MasteringBiology Access. MasteringBiology activities are worth a significant part of your grade. If you purchase/rent your textbook through another source, you may not receive a valid MasteringBiology code and will not be able to complete the activities. Your grade will suffer as a result.*



# Expectations

## Teacher Expectations

I believe that anyone can succeed in the class if the right learning environment and strategies are used. I have structured this course to provide a variety of learning assessments with diverse learners in mind. I value your uniqueness and experience and want you to value your classmates as well. We are all learning together so please reach out to me if you have any questions or need extra assistance. I am here to help you learn. 😊

- I will follow the course outline as closely as possible and will notify you of modifications in the outline if they happen.
- I will attempt to create and maintain an atmosphere in which you feel free to both read others' views and express your own views and ask questions to increase your learning.
- Please tell me or email me about anything which you are unclear. I tend to respond quickly, and I want to be supportive of your learning and growth.

## Student Expectations

Set goals for yourself for this course and plan/work to meet them. Meet all course deadlines and you will receive feedback within a week on the submitted assignment. Value your classmate's opinions and be open to learn new ways of thinking. Complete all assignments, quizzes, and exams without sharing/copying other's work or answers and be proud of your work.

- Please inform me onsite or through e-mail if you will be unable to complete work.
- You are expected to complete assignments thoroughly and on time and contribute to class discussions.
- You are expected to check your Atlas email and Canvas inbox on a regular basis throughout the week.
- You can expect to devote **3-6 hours** each week to this course. I recommend scheduling a couple of days a week working on the assignments. Start them early so you can ask questions.
- Feel free to share feedback regarding how well the class is meeting your needs or if material is unclear. I make changes to the class based on feedback.
- It is also expected that you will treat classmates onsite and online with respect and observe the rules of netiquette and confidentiality regarding personal information shared in class.

**Tentative Course Schedule\*: All exam and assignment due dates are also found in Canvas**

<b>Course Schedule</b>		
<b><u>Week</u></b>	<b><u>Topics</u></b>	<b><u>Due Dates</u></b>
1 Aug 19-25	<ul style="list-style-type: none"> <li>• Orientation Module: Orientation Quiz, Be in the Know Assignment</li> <li>• Introduction Discussion – Let’s Break Ice! and 2 replies</li> <li>• Register into MasteringBiology</li> <li>• Take the Honorlock survey</li> </ul>	Sun, Aug 25
2 Aug 26-Sept 1	<ul style="list-style-type: none"> <li>• Read Chapter 1: Learning About Life</li> <li>• MasteringBiology Activities: Case Study and Chapter Activities</li> <li>• Discussion: Scientific Method, Evolution, and Religion</li> <li>• Authentic Assessment: Scientific Research Article Analysis</li> </ul>	Sun, Sept 1
3 Sept 2-Sept 8	<ul style="list-style-type: none"> <li>• Read Chapter 2: Essential Chemistry for Biology</li> <li>• MasteringBiology Activities: Case Study and Chapter Activities</li> <li>• Discussion: Everyday Chemistry</li> <li>• Authentic Assessment: Element</li> </ul>	Sun, Sept 8
4 Sept 9-Sept 15	<ul style="list-style-type: none"> <li>• Read Chapter 3: The Molecules of Life</li> <li>• MasteringBiology Activities: Case Study and Chapter Activities</li> <li>• Discussion: Diet and Nutrition</li> <li>• Authentic Assessment: Food Label Nutritional Analysis</li> </ul>	Sun, Sept 15
5 Sept 16-Sept 22	<ul style="list-style-type: none"> <li>• Read Chapter 4: A Tour of the Cell</li> <li>• MasteringBiology Activities: Case Study and Chapter Activities</li> <li>• Discussion: Bacterial Cells and Antibiotics</li> <li>• Authentic Assessment: Cell Types</li> </ul>	Sun, Sept 22
6 Sept 23-Sept 29	<ul style="list-style-type: none"> <li>• Read Chapter 5: The Working Cell</li> <li>• MasteringBiology Activities: Case Study and Chapter Activities</li> <li>• Discussion: What we Think we Know About Metabolism may be Wrong</li> </ul>	Sun, Sept 29
7 Sept 30-Oct 6	<ul style="list-style-type: none"> <li>• Read Chapter 6: Cellular Respiration: Obtaining Energy from Food</li> <li>• MasteringBiology Activities: Case Study and Chapter Activities</li> <li>• Discussion: The Chemistry of Wine Making</li> </ul>	Sun, Oct 6
8 Oct 7-Oct 13	<ul style="list-style-type: none"> <li>• Read Chapter 7: Photosynthesis: Using Light to Make Food</li> <li>• MasteringBiology Activities: Case Study and Chapter Activities</li> <li>• <b>Midterm Exam (Chapters 1-7)</b></li> </ul>	Sun, Oct 13
9 Oct 14-Oct 20	<ul style="list-style-type: none"> <li>• Read Chapter 8: Cellular Reproduction: Cells from Cells</li> <li>• MasteringBiology Activities: Case Study and Chapter Activities</li> <li>• Discussion: Cancer Treatment VS Prevention</li> <li>• Authentic Assessment: Who was Henrietta Lacks?</li> </ul>	Sun, Oct 20
10 Oct 21-Oct 27	<ul style="list-style-type: none"> <li>• Read Chapter 9: Patterns of Inheritance</li> <li>• MasteringBiology Activities: Case Study and Chapter Activities</li> <li>• Discussion: ABO Blood Groups</li> <li>• Authentic Assessment: Investigating Genetic Ancestry Tests</li> </ul>	Sun, Oct 27

<b>Course Schedule</b>		
<b><u>Week</u></b>	<b><u>Topics</u></b>	<b><u>Due Dates</u></b>
11 Oct 28-Nov 3	<ul style="list-style-type: none"> <li>• Read Chapter 10: The Structure and Function of DNA</li> <li>• MasteringBiology Activities: Case Study and Chapter Activities</li> <li>• Discussion: Telomeres and Aging</li> <li>• Authentic Assessment: Central Dogma and Genetic Medicine</li> </ul>	Sun, Nov 3
12 Nov 4-Nov 10	<ul style="list-style-type: none"> <li>• Read Chapter 11: How Genes Are Controlled</li> <li>• MasteringBiology Activities: Case Study and Chapter Activities</li> <li>• Discussion: A Cure for Cancer</li> <li>• Authentic Assessment: The Lactose Operon</li> </ul>	Sun, Nov 10
13 Nov 11-Nov 17	<ul style="list-style-type: none"> <li>• Read Chapter 12: DNA Technology</li> <li>• MasteringBiology Activities: Case Study and Chapter Activities</li> <li>• Discussion: GMOs and Genetically Modified Embryos</li> </ul>	Sun, Nov 17
14 Nov 18-Nov 24	<ul style="list-style-type: none"> <li>• Final Exam Review</li> <li>• <b>Final Exam (Chapters 8-12)</b></li> </ul>	Sun, Nov 24
15 Nov 25-Dec 1	<ul style="list-style-type: none"> <li>• Metacognition assignment</li> <li>• <b>Thanksgiving Break</b></li> </ul>	Tue, Nov 24
16 Dec 2-Dec 4	<ul style="list-style-type: none"> <li>• Recap assignment</li> <li>• Late submission of Final Exam and assignments</li> </ul>	Wed, Dec 4

\*The dates of these topics serve as a guideline and are subject to change.

**Other important dates:**

- Aug 26 (@ 11:59pm) – Drop/Refund Deadline
- Sept 2 – Labor Day (college closed)
- Oct 23 through Nov 7 – Student Feedback on Instruction Period
- Oct 25 (@ 11:59pm) – Student Initiated Withdrawal Deadline
- Nov 11 – Veteran’s Day (no class)
- Nov 27-Dec 1 – Thanksgiving Break (college closed)
- Dec 8 – Term ends
- Dec 9 – Final grades viewable in ATLAS

## Assessment Method and Evaluation Scale

**Authentic Assessments:** An authentic assignment is one that requires application of what you have learned to a new situation, and demands judgment to determine what information and skills are relevant and how they should be used. Individual authentic assessments will be assigned to demonstrate an understanding of the material. The products may include developing PowerPoints, videos, infographics, papers, etc. A rubric will be provided for grading the assignment.

**Student Presentations:** To increase relevance to real-world situations, students will prepare and present presentations for a chapter they are assigned to at the beginning of the semester. There is an emphasis for the students to relate the material from their chapter to their profession. A questions/comments/feedback discussion will be held afterward along with peer feedback. Audience peer feedback will be graded and used for attendance during onsite meetings.

**Midterm and Final Exams:** As understanding checkpoints, the multiple choice midterm and final exams will serve as an assessment of your biology knowledge. The college has adopted the Honorlock application as the remote proctoring application for online examinations. This is an extension for the Chrome browser and is required to access the exams in Canvas, along with a webcam and microphone. Students must use a computer with reliable internet access because excuses or failure to complete assessments due to computer error will not be permitted.

**MasteringBiology Activities:** There are associated studies and activities associated with the book. You will have links that will direct you to the activities in Canvas. You will have multiple chances to increase your score.

**Discussions:** Since Biology often includes interesting topics and associated emerging technology, weekly online discussions will be included in the course. Online discussions will be open for two weeks following the chapter covered. The student must make an initial response (3 pts) then respond to at least two other students (2 pts). Discussion postings should be:

- Substantial – Thoughtful, original, relevant and contributes to the overall learning of the group.
- Thought-provoking – Stimulates thinking and reasoning.
- Timely – Post early to give your peers time to respond, this contributes to a rich discussion.
- Logical, concise, and grammatical.
- Convey “your presence” – Reinforce your conclusions with real life experiences.

**Extra Credit:** Students have the opportunity to earn extra credit by completing the Student Feedback at the end of the semester.

### Late Work/Makeup Policy

There is a two-week grace period after assignments are due before they close permanently. The late penalty on assignments is 5% per day (up to 50%). If you cannot complete the work due to a documented absence, contact me immediately. **Late work after the grace period will not be accepted!**

### Grading Scale

A = 89.5% - 100%, B = 79.5% - 89.49%, C = 69.5% - 79.49%, D = 59.5% - 69.49%, F = below 59.49%

1. Authentic Assessments – 20%
2. Student Presentations – 40%
3. Exams – 15%
4. MasteringBiology Activities – 15%
5. Discussions – 10%

## College & Course Policies

### No Show Policy

If you do not attend class during the first week you will be withdrawn from the class as a "no show". Class attendance is required for onsite/mixed-mode classes; students who are not actively participating in an onsite/mixed-mode class must be withdrawn by the instructor at the end of the first week as a "no show". If you are withdrawn as a "no show," you will be financially responsible for the class and a final grade of "WN" will appear on your transcript for the course.

### Attendance Policy

The College believes that regular attendance and class participation are significant factors which promote success in college. Students are expected to attend all onsite meetings unless unavoidable emergencies prevent attendance. Valid documented absences will be dealt with on a case-by-case basis and may be categorized as excused. You must contact your Professor within 48 hours of absence & submit valid documentation within one week. Excuses from parents (or other family members) are NOT accepted...even if your family member is a doctor, dentist, etc. Failure to submit documentation = unexcused absence. Excused absences will not affect your grade. Unexcused absences do affect your grade however. By missing an unexcused onsite meeting, you will lose all points associated with the missed class. Roll will be taken at the beginning of every class. Students arriving more than five (5) minutes late will be recorded as being absent from class unless they notify the instructor of their presence in class at the end of the period.

As this is web-assisted course, material is available 24/7 online, managed through Canvas. You must have access to the Internet (available via loaned laptops on all Valencia campuses) to complete the course requirements. Your online attendance will be checked based on your participation in the Canvas course and submission of coursework.

### Withdrawal

The deadline for Drop/Refund is **August 26** and for Withdrawal is **October 25**. Per Valencia policy a student who withdraws from class before the established deadline for a particular term will receive a grade of "W". A student is not permitted to withdraw after the withdrawal deadline.

A faculty member cannot withdraw a student, so it is up to the student to complete a student-initiated withdrawal up to the withdrawal deadline. A student-initiated withdrawal will receive a grade of "W". After the withdrawal deadline, students cannot withdraw themselves and the student will receive the grade earned at the end of the course. Any student who withdraws from a class during a third or subsequent attempt in the same course will be assigned a grade of "F." If you do not intend to complete the course, you must withdraw yourself prior to the withdrawal date.

### Academic Honesty

All forms of academic dishonesty are prohibited at Valencia College. Academic dishonesty includes, but is not limited to, acts or attempted acts of plagiarism, cheating, furnishing false information, forgery, alteration or misuse of documents, misconduct during a testing situation, facilitating academic dishonesty, and misuse of identification with intent to defraud or deceive.

All work submitted by students is expected to be the result of the students' individual thoughts, research, and self-expression. Whenever a student uses ideas, wording, or organization from another source, the source shall be appropriately acknowledged. If a student is caught submitting plagiarized work, a first offense will result in a zero score on the assignment, a second offense will result a class grade of F.



## **College Student Conduct Policy**

Valencia is dedicated not only to the advancement of knowledge and learning but also to the development of responsible personal and social conduct. As a registered student, you assume the responsibility for conducting yourself in a manner that contributes positively to Valencia's learning community and that does not impair, interfere with, or obstruct the orderly conduct, processes, and functions of the college as described in the Student Code of Conduct.

## **Behavior/Netiquette**

It is important to be aware of your behavior in an onsite and online learning environment to ensure positive interactions with your instructor and peers. This requires you to follow some guidelines for behaviors.

All students are expected to:

- Show respect for the instructor and for other students in the course
- Respect the privacy of other students
- Express differences of opinion in a polite and rational way
- Maintain an environment of constructive criticism when commenting on the work of other students
- Remain focused on the learning topics during discussions and activities

## **Third Party Software & FERPA Policy**

Valencia College has a firm commitment to protecting the privacy rights of its students. Under no circumstances will your test scores, total points, or final grades be discussed on the telephone or over email. FERPA rights to privacy prevent the divulging of scores or related materials by these means. Scores will only be given face-to-face with each student or by accessing your ATLAS account.

## **Communication**

You may contact me in various ways during this semester.

- Besides in person, you may contact me through the Canvas Inbox. This is probably the best and quickest method of online communication. I will respond to your message within 48 hours, often much sooner, with the exception of days and times when the college is closed.
- You may email me at [jcastro22@valenciacollege.edu](mailto:jcastro22@valenciacollege.edu). In your messages (if not using the Canvas Inbox), please indicate your course number so that I may better assist you.

## **Digital Device Requirements**

You should verify computer software and hardware requirements to ensure course work can be submitted successfully. Since all assignments are submitted online, access to a digital device is required for this course.

Canvas list minimum computer specifications and supported browsers to ensure compatibility. The Chrome browser is recommended. You are also encouraged to install the Canvas app on their Android phone or iPhone in order to receive mobile notifications and to access your courses via your mobile device.

## **Notifications**

Make sure that you turn on your Push Notifications and click on the "checkmark" for Announcements and Submission Comments to ensure that you receive those immediately. It only needs to be changed on one device. Add a profile pic to Canvas for a personal touch.

## **Student Support Services**

### **Student Assistance Program**

Valencia College has contracted with a private and confidential counseling service (Bay Care Behavioral Health Student Assistance Program (SAP)) to provide FREE short-term assistance to students who need to resolve problems that are affecting their college performance. Examples might include stress, relationship/family issues, alcohol/drug problems, eating disorders, depression, and gender issues. If you are experiencing any of these issues, call 1-800-878-5470 to speak to a professional counselor. For more information, log into Atlas, click on the “Students” tab, and click on “BayCare Health System,” located under “Health and Wellness.”

### **Students Requiring Academic Accommodations**

Students with disabilities who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities (OSD) and discuss specific needs with me, preferably during the first two weeks of the semester. The OSD (East Campus, Building 5, Room 216, 407-582-2229) determines accommodations based on appropriate documentation of disabilities.

### **Title IX**

Valencia College strives to be a place free from all forms of discrimination. Title IX protects students from discrimination based upon sex including protections against sexual violence, domestic violence, and stalking. This also includes protections for students who are pregnant or may become pregnant. If you experience sexual violence, domestic violence or stalking and would like assistance there are several options available to you. Valencia partners with the Victim Service Center of Central Florida which is a confidential resource available 24/7. They can be reached by calling 407-497-6701. If you would like assistance on campus, you can go to the website or contact Valencia College’s Title IX and Equal Opportunity Officer, Ryan Kane, by emailing rkane8@valenciacollege.edu. If you would like to report to law enforcement, you may visit Campus Security or call 911.

Please note that there are no confidential resources on campus. As your professor, I am required to report any information mentioned in this statement to the appropriate campus resources. This will include your name and detailed information shared with me. We take privacy very seriously at the College and only those who have a legitimate need to know the information will be provided with this information.

### **Copyright**

To avoid copyright infringement, any materials produced specifically for this class can ONLY be used during this term for this class.

### **Disclaimer**

Changes in the syllabus, schedule, evaluation procedures, and/or homework assignments may be made at any time at the discretion of the professor. If you are absent, it is your responsibility to find out what, if any, announcements or changes have been made.