This course supports the performance assessment for CDP1. The course covers 6 competencies and represents 1 competency units.

Introduction

Overview
This course is an introduction to the biological sciences for non-major students. The course contains supporting media, readings, and excerpts to support a focus on course topics. These topics include the following:

- cell structure and function,
- bioenergetics
- DNA structure and function
- protein synthesis cell reproduction
- taxonomy
- evolution
- ecology

You should have an understanding of mathematical concepts and be able to perform basic calculations. You should have completed English Composition II (ENGL 1020) or the equivalent. This course is part of general education core and should be completed early in degree path.

Watch the following video for an introduction to this course:

Competencies

This course provides guidance to help you demonstrate the following 7 competencies:

- Competency 119.1.1: Living Organisms
  The graduate analyzes the characteristics and classification of living organisms.
- Competency 119.1.2: Cellular Chemistry
  The graduate analyzes the chemical composition of cells and various processes that happen at the cellular level.
- Competency 119.1.3: Cell Biology
  The graduate analyzes different types of cells base on their structures and biological functions.
- Competency 119.1.4: Genetics
  The graduate analyzes the biological basis and patterns of heredity, inheritance, and genetic expression.
- Competency 119.1.5: Plant Biology
  The graduate analyzes the physical structure, evolution, and reproduction of plants.
- Competency 119.1.7: Ecology
  The graduate analyzes interdependencies of organisms and their environments.
Course Instructor Assistance
As you prepare to successfully demonstrate competency in this subject, remember that course instructors stand ready to help you reach your educational goals. As subject matter experts, mentors enjoy and take pride in helping students become reflective learners, problem solvers, and critical thinkers. Course instructors are excited to hear from you and eager to work with you.

Successful students report that working with a course instructor is the key to their success. Course instructors are able to share tips on approaches, tools, and skills that can help you apply the content you're studying. They also provide guidance in assessment preparation strategies and troubleshoot areas of deficiency. Even if things don't work out on your first try, course instructors act as a support system to guide you through the revision process. You should expect to work with course instructors for the duration of your coursework, and you are encouraged to contact them as soon as you begin. Course instructors are fully committed to your success!

Preparing for Success

The information in this section is provided to detail the resources available for you to use as you complete this course.

Learning Resources
The learning resources listed in this section are required to complete the activities in this course. For many resources, WGU has provided automatic access through the course. However, you may need to manually enroll in or independently acquire other resources. Read the full instructions provided to ensure that you have access to all of your resources in a timely manner.

Manually Enrolled Learning Resources

Take a moment to enroll in the learning resources listed in this section. To enroll, navigate to the “Learning Resources” tab, click the “Sections” button, and then click the “Enroll Now” button in the pop-up window for each resource. Once your mentor approves your enrollment in the resource, you will receive an e-mail with further access instructions. Contact your mentor if you have questions.

LateNite Labs
The LateNite Labs materials provide biology concepts applications through virtual laboratories. The links are provided in the activities.

View the following video for a brief introduction to the LateNite labs laboratory:

Note: To download this video, right-click the following link and choose "Save as...": download video.

Live Events - Introduction to Biology

- Live Events Calendar.

Course Instructor Assistance
You can contact a course instructor using the Contact Your Course Instructor button in the top right corner of this course. You are also welcome to email us directly with questions. You can even book your own appointment with us! Just choose a mentor from the list below to be taken to their calendar:

- Dr. Shane Cutler: You Can Book Me
- Dr. Angela Nelson: You Can Book Me
- Dr. Ami Robinson: You Can Book Me
- Dr. Kelly Thrippleton-Hunter: You Can Book Me
- Dr. Matthew Weaver: You Can Book Me

Looking for information about upcoming CDP1 cohorts? Click here for information and sign-up sheets.

Looking for recorded videos? Click here.

Looking for LateNite Lab FAQs? Click here.

Looking for the live Biology Events? Click here for more information.

**Pacing Guide**

The pacing guide suggests a weekly structure to pace your completion of learning activities. It is provided as a suggestion and does not represent a mandatory schedule. Follow the pacing guide carefully to complete the course in the suggested timeframe.

- Pacing Guide: Introduction to Biology Lab

*Note: This pacing guide does not replace the course. Please continue to refer to the course for a comprehensive list of the resources and activities.*

**Biology Lab**

It is always wise to take a couple of minutes to familiarize yourself with your course materials before beginning your studies. As you do this, consider the course dynamics and tools available to you. These are all established to help you complete the course successfully.

**LateNite Labs**

LateNite Labs is your virtual laboratory. LateNite Labs tools are available for your work. You may experience short delays as labs information loads.

This topic addresses the following competencies:

- Competency 119.1.1: Living Organisms
  The graduate analyzes the characteristics and classification of living organisms.
- Competency 119.1.2: Cellular Chemistry
  The graduate analyzes the chemical composition of cells and various processes that happen at the cellular level.
- Competency 119.1.3: Cell Biology
The graduate analyzes different types of cells based on their structures and biological functions.

- Competency 119.1.4: Genetics
  The graduate analyzes the biological basis and patterns of heredity, inheritance, and genetic expression.
- Competency 119.1.5: Plant Biology
  The graduate analyzes the physical structure, evolution, and reproduction of plants.
- Competency 119.1.7: Ecology
  The graduate analyzes interdependencies of organisms and their environments.

### Computer Setup

Before you begin any work in LateNite Labs, you should:

- View the following demonstration videos provided to familiarize yourself with the program.
  - Around the bench
  - Handling objects
  - Student course management
  - Review system requirements and set up your computer accordingly.
  - Complete the Browser Compatibility Test and make any adjustments needed.

To assist you using LateNite Labs, a student manual and FAQ page are available. You may contact LateNite Labs Help Desk if you have any questions about using LateNite Labs.

### Watch Tutorials

The following three tutorials are suggested before you begin working in LateNite Labs:

- Around the bench
- Handling objects
- Dashboard & assignments

### Activity Practice Lab: Scientific Method

The Practice Lab: Scientific Method is designed to familiarize you with LateNite Lab work and skills required for successful completion. You may also wish to review the demonstration materials provided earlier in this course of study.

Log in to LateNite Labs and complete the following:

- Complete Practice Lab: Scientific Methods using LateNite Labs laboratory.
- Review lab assignment information and background.
- Review lab procedures.
- Complete your lab making lab notes as you work through the process.

Be certain to save your lab notes and work! You may experience short delays as labs information loads. Consult with your course instructor if you have any questions about
CDP1 - Introduction to Biology Lab
Course of Study

conducting a lab.

Final Steps

Congratulations on completing the activities in this course! This course has prepared you to complete the assessments associated with this course. If you have not already been directed to complete the assessments, schedule and complete them now.

CDP1 Project Performance Assessment
Introduction to Biology Lab (CDP1) Task 1

This topic will guide you as you engage in the Learning Resource for this course.

Task 1: Before completing this task, please read the task instructions in Taskstream.

Part A: For this part of the task, you will complete three virtual labs in LateNite Labs and report on your experiences.

If you would like some further background information about the subject matter that is covered in the labs that you plan on completing, or would like to connect the labs to portions of the Introduction to Biology (CDC1) course, feel free to use the Cengage MindTap Learning Resource and access the related eText Chapter(s) for each lab listed below:

Lab 1:
- Biomolecules Lab – Chapter 2

Lab 2: Choose one lab
- DNA Lab – Chapter 6 and Chapter 9
- Enzyme Lab – Chapter 2 and Chapter 4

Lab 3: Choose one lab
- Evolution Lab – Chapter 11 and Chapter 12
- Genetics of Corn Lab – Chapter 9

Before working through any lab, we highly suggest that you copy the corresponding Lab Assignment for each lab that you plan on completing and paste it into a Word document (or similar). To find the Lab Assignments, go to the LateNite Lab Dashboard page and click on ‘Go’ on the Lab Assignment that you would like to access. Follow the steps below to copy and paste the Lab Assignment into a Word document (or similar):

1. Open a blank Word document.
2. Type your name and WGU email address at the top of the page.
3. Insert 2 blank lines (e.g., press “Enter” twice).
4. Select all of the LateNite Lab Assignment, including text, graphs, etc.
5. Copy what you have selected in LateNite Labs and paste it into your Word document.
6. Save the Word document.
7. Repeat steps 4-7 for each lab that you complete.

While working through each lab, we suggest that you:

- Use a separate Word document (or similar) to take notes in while you complete each lab. We do not recommend using the Lab Notes in LateNite Labs to take notes as the saving feature does not always function properly.
- Use your lab notes to help you answer and address the Lab Assignment questions for each of the three labs that you complete.
- When completing the Lab Assignments for Part A, please be aware that your responses to the questions require complete sentences with correct punctuation and grammar. For further information about Articulation of Response, click here.

Part B: For this part of the task, you will want to choose one of the labs that you completed in Part A and select two scientific concepts that relate to that particular lab. You will then discuss those concepts and how data that you collected from that particular lab help support your chosen concepts. If you need assistance on selecting concepts or want to make sure the concepts that you select relate to the lab, please do not hesitate to reach out to a course instructor and we would be more than happy to assist you.

If you would like some background information regarding the subject matter that is covered in the labs or would like to connect the labs to portions of the Introduction to Biology (CDC1) course, feel free to use the Cengage MindTap Learning Resource and access the related eText Chapter(s) for each lab listed below:

Lab 1:

- Biomolecules Lab – Chapter 2

Lab 2: Choose one lab

- DNA Lab – Chapter 6 and Chapter 9
- Enzyme Lab – Chapter 2 and Chapter 4

Lab 3: Choose one lab

- Evolution Lab – Chapter 11 and Chapter 12
- Genetics of Corn Lab – Chapter 9

NOTE: When addressing Part B of Task 1, please be mindful of your articulation. You are responsible for being able to credibly communicate central ideas and the details of your work. For further information about Articulation of Response, click here.

Once Part A and B have been completed, combine them into one Word document (or similar).
and submit your work to Taskstream in the related assessment link. DO NOT SUBMIT YOUR WORK IN LATE NIGHT LABS. If you do accidently submit your work to LateNite Labs, please contact your course instructor immediately.

Click on the link to see an example of Task 1.

**Task 2**: Before completing this task, please read the task instructions in Taskstream.

“An ecosystem consists of all the organisms living in a community as well as all abiotic factors which they interact” (Campbell & Reece, 2005). There are many different types of ecosystems all over the world. Some examples of specific ecosystems are the mangrove swamps of Borneo, the old-growth forests of the Pacific Northwest, the Florida Everglades, the Sonoran Desert in Arizona, the Costa Rican rainforests, the ephemeral pools in Canyonlands National Park, a particular lake or forest, etc. In this task, you will select and analyze a specific ecosystem.

If you would like further background information about the subject matter relating to ecosystems to help you understand or complete this task, feel free to use the Cengage MindTap Learning Resource and access the related eText Chapter(s) for this task listed below:

- **Chapter 17** – Communities and Ecosystems
- **Chapter 18** – The Biosphere and Human Effects

After completing Task 2, double check the task rubric in Taskstream to make sure you have addressed all aspects of the task. When you are confident that you have done so, go ahead and submit your work to Taskstream in the related assessment link.

Click on the link to see an example of Task 2.