



## U200-115L: Human Biology Lab

**Course Format:** Online

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**Course credits:** 1

**Course Level:** Introductory

**Prerequisites:** Concurrent enrollment in or completion of U200-115 Human Biology with a C or better or the equivalent recommended. Appropriate for advanced high school and all college students.

**Course Description:** This course will help you learn about why science, in particular biology, is important. Additional skills honed by this course, such as critical thinking and developing evaluation skills, will also benefit all aspects of your life. In this course you will investigate the scientific method; chemistry of life; cell division and cancer; genetics; organization and regulation of the body systems; cardiovascular, nervous, reproductive, respiratory, digestive systems; epidemiology; evolution; population ecology; ecosystems

### Required Course Materials

- Textbook: [Wakim, Suzanne & Grewal, Mandeep. Human Biology](#). OER online text is available through LibreTexts Biology
- A list of materials required for each lab will be provided to you. The labs have been designed so that you can use household items that are already located around your house, and can be performed with as little of cost as possible. You can expect to spend around \$100 if you needed to buy all materials on this list.

### Hardware Requirements

For some assignments, you will need to upload a scanned document of completed work. If you do not have access to a scanner, you can take a picture, and upload the picture in place of a scanned document.

### Course Learning Objectives

- Perform at-home and virtual laboratory experiments.
- Collect data using the appropriate scientific standards and units.
- Draw conclusions from experimental data.

### Course Overview



MODULE/ UNIT #	MODULE/UNIT TOPIC	EVALUATED ACTIVITIES
1	The Scientific Method	The Scientific Method lab report & worksheet
2	Chemistry & Macromolecules	Lab 2 worksheet: DNA Extraction, Enzymes, & Atom-Building
3	Cell Structure & Function	Lab 3 worksheet: Osmosis & Cellular Respiration
4	Cell Division & Cancer	Lab 4 worksheet: Cell Division & Cancer
5	Genetics	Lab 5 worksheet: Molecular Genetics & Genetic Testing
6	Phylogenies & Natural Selection	Lab 6 worksheet: Phylogenies & Natural Selection
7	Integumentary System	Lab 7 worksheet: Integumentary System
8	Heart Anatomy	Lab 8 worksheet: heart Anatomy Lab 8 report: Heart anatomy & Physiology (report #2)
9	Blood Typing	Lab 9 worksheet: Blood Typing
10	Immunology	Lab 10 worksheet: Immunology
11	Epidemiology	Lab 11 worksheet: Epidemiology
12	Digestion & Nutrition	Lab 12 worksheet: Digestion & Nutrition
13	Respiratory System	Lab 13 worksheet: Respiratory System
14	Nervous System	Lab 14 worksheet: The Nervous System Lab 14 report: Nervous System (report #3)
15	Organ Systems, Reproduction, & Development	Lab 15 worksheet: Sex Verification Testing & Fetal Pig Dissection
16	Population Dynamics	Lab 16 worksheet: Population Dynamics
17	Ecosystems	Lab 17 worksheet: Ecosystem Simulation



### Evaluation Methods

Your final grade will be based on your performance on the following:

1. Module Labs (17 total) = 637 points
2. Module Lab Reports (2 total) = 50 points

**Total = 687 points**

### Module Labs

There are a total of seventeen labs in the course, one for each module. The type of lab will vary, depending on module content material. Some you will complete using available household items, and others will require the use of a virtual lab or website. Points will vary from 20 to 64 points, based on the activities required in the lab.

### Module Lab Reports

Because this is a lab course, you will be expected to demonstrate the skill of writing a lab report. The first module will help you learn how to draft a lab report. In later modules, you will be expected to create your own experiment, and write a full lab report. These are worth 25 points apiece. **Note:** Lab reports 8 & 14 will be submitted in the Lab Reports section of the Assignments area, separate from the worksheet uploads.

**Exam Method: There are no exams in this course**

### Grading Scale

The following grading scale is used to evaluate all course requirements and determine your final grade:

A = 93–100	B = 83–87.9	C = 70–77.9	D = 60–69.9
AB = 88–92.9	BC = 78–82.9		F = Below 60

### *Pass/Fail Option*

Students who enroll in an Independent Learning (IL) course under the pass/fail option will receive a final grade of S in place of a final grade equivalent to an A, AB, B, BC, or C and a final grade of U in place of a final grade equivalent to a D or F.