

## **Biology 6L**

### **Physiology Laboratory** (Section 1101)

**Hartnell College, Spring 2025**

Instructor: Alexander Edens

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Office: S-233

Class Hours: Monday and Wednesday  
2:40 pm – 5:50 pm S-120

Office Hours: Monday and Wednesday 9:00 am - 10:00 am Room S-233  
Tuesday and Thursday 3:00 pm - 4:00 pm Room S-233

Required Materials:

Fox, Stuart Ira A Laboratory Guide to Human Physiology, McGraw Hill

The campus bookstore sells a custom edition of this laboratory manual printed especially for Biology 6L. The ISBN for the custom edition is 9781307656886 or 9781307769807. However, any edition of the Fox physiology laboratory manual is acceptable for Biology 6L.

Recommended materials:

Colored pencil or pen set for taking notes and sketching

Course description: An introduction to the laboratory study of the structure and function of human systems with an emphasis on the collection and analysis of chemical and physical data which relate to the concept of homeostasis in the human body.

Course websites:

All of the course material (syllabus, laboratory handouts, grades, review questions, etc) are found at this website:

<http://www.lightsinheaven.com/Hartnell/Bio6L/Bio6Lhome.html>

Student learning outcomes:

(a) Given the name of a biological molecule, students will describe the functions and locations of the molecule in the human body.

(b) Given the results of standard laboratory cardiovascular system tests (including blood tests), the student will analyze and interpret the results.

Exam dates: The exam dates are subject to change depending on our rate of progress.

Midterm 1----- Wednesday, February 19  
Midterm 2 ----- Monday, March 17  
Midterm 3----- Monday, April 14  
Midterm 4----- Monday, April 28  
Final exam (comprehensive)----- Wednesday, May 21  
2:40 pm – 5:50 pm

Each student's grade in the class will be determined by the total points they accumulate throughout the semester. A total of 600 points are possible:

<u>Point total:</u>	<u>% of total</u>	<u>Grade</u>
600 - 540	100 - 90	A
539 - 480	89 - 80	B
479 - 390	79 - 65	C
389 - 300	64 - 50	D
299 - 0	49 - 0	F

Last day to withdraw from class with  
a No-Grade-of-Record (NGR)----- Friday, February 20

Last day to withdraw from class  
with a "W"----- Friday, April 25

Points:

600 possible points can be earned throughout the semester. Points are earned through exit quizzes, weekly quizzes, midterms, and the final exam. Points can be lost for unsafe, disruptive, or inappropriate behavior.

<u>Points (600)</u>	<u>Source</u>	<u>Computation</u>
300	Midterms	100 * 3 highest (out of 4)
96	Weekly Quizzes	8 * 12 highest (out of 13)
46	Exit quizzes	2 * 23 highest (out of 24)
158	Final exam (comprehensive)	

Earning points:

Midterms: There are four 100-point midterm exams. There are no make-up midterms. All missed midterms will be recorded as a zero score. However, the single lowest score of the five midterms will not be counted, so a total of 300 points (100 points x 3 midterms) can be earned from midterms.

Weekly quizzes: Thirteen 8-point laboratory weekly quizzes will be given throughout the semester. They will usually be given once a week at the beginning of the period. They will cover the concepts of the previous week's laboratory assignments. Students must attend, fully participate in, and complete the previous week's laboratory assignments for full credit on the weekly quiz, regardless of any correctly answered questions on the quiz. Missed weekly quizzes cannot be made up and will be counted as a zero. Each student's single lowest laboratory weekly quiz will not be counted so at total 96 points (8 points \* 12 highest weekly quizzes) can be earned.

Laboratory exit quizzes: Twenty-four 2-point laboratory exit quizzes will be given throughout the semester. They will be given at the end of each laboratory period and they will cover the concepts of that laboratory assignment. Students must attend and complete the laboratory to take the exit quiz. Missed exit quizzes cannot be made up and will be counted as a zero. Each student's single lowest laboratory exit quiz will not be counted so at total 46 points (2 points\* 23 highest exit quizzes) can be earned.

Final exam: There is one 158-point comprehensive final exam at the end of the semester. The final exam score cannot be dropped. Missing the final exam results in an incomplete grade for the course. The incomplete automatically becomes an F unless you contact me to arrange a make up final exam within one week. Unless the student provides a signed doctor's note verifying that the final exam was

missed for a valid medical reason, 10% of the student's points will be deducted from their overall point total.

Losing points:

Unsafe, disruptive, or inappropriate behavior may result in **being dismissed from the classroom (which may result in loss of points), a letter of reprimand being placed in the student's permanent file at Hartnell College, and being dropped from the course.** These behaviors include anything that might interfere with your or any other students' safety or learning the material. Examples include talking during instruction, using any non-course materials/objects during class, not following laboratory safety directions, or not cleaning up properly. In addition, chronic unsafe or disruptive behavior will result in the student being dropped from the course.

Student personal electronic devices (such as phones, laptops, and tablets) are allowed only on the condition that the instructor deems they are being used for Biology 6L course-related instructional purposes. No personal electronic devices are to be used during midterms, quizzes, or the final exam. Any form of academic dishonesty (cheating) will result in receiving zero points for the assignment, loss of three times the maximum point value of the assignment, being dismissed from all sections of the course for up to two days (which will result in loss of additional points due to missed quizzes and other assignments during the dismissed days), and a letter of reprimand being placed in the student's permanent records at Hartnell College. Cheating includes (but is not limited to) having any books, notes, or any electronic device (whether in use or not) not completely zipped shut in a backpack/purse during an exam or quiz, having any written information on desktops or other places that might be visible during an exam period or quiz, supplying or receiving information about questions or answers on exams or quizzes without notifying me immediately, and any other form of obtaining or providing information during an exam or quiz other than the information provided by the instructor on the student's own exam or quiz itself.

If you receive any information about questions or answers on exams or quizzes, you are guilty of academic dishonesty unless you must notify me immediately regarding your name, what information you received, and who provided you with this information. You may notify me about the information you received in any way you wish but be aware that there is a reporting link on the course website:

<http://www.lightsinheaven.com/Hartnell/Bio6L/Bio6LAcademicHonesty.php>

You may also use this link to anonymously report any academic dishonesty that you observe but that do not involve you or to anonymously report any other course-related concerns that you have.

Other class policies:

There are no extra-credit points and no make-up labs, quizzes, or midterms available in this class. All missed assignments will be counted as zeros. Students have one week to review the grading and corrections on all returned materials. After one week no change in score will be considered.

A student absent for two weeks of instruction (consecutive or non-consecutive) may be dropped from the class. That is, a student may be dropped after missing one more class meeting than twice the number of class meetings per week.

Laboratory exercises: Although most of the laboratory exercises in this course are in the lab manual, certain ones are not in the lab manual. These non-lab manual exercises are posted on the class web site as Microsoft Word documents. Students are expected to print out these exercises and bring them to lab.

Laboratory schedule: (subject to change)

<u>Date</u>	<u>Topic and Laboratory Exercises</u>
Jan 27, Monday	Unit Factor method of problem solving (web handout)
Jan 29, Wednesday	The metric system (web handout)
Feb 3, Monday	Math review (web handout)
Feb 5, Wednesday	Diffusion/Osmosis (Web handout and Ex: 2.5)
Feb 10, Monday	Glucose determination (Web handout, Ex: 2.1A)
Feb 12, Wednesday	Histology, part 1 (Web handout and Ex: 1.1 and 1.2)
Feb 19, Wednesday	<b>Midterm 1</b>
Feb 24, Monday	Histology, part 2 (Web handout and Ex: 1.1 and 1.2)
Feb 26, Wednesday	Digestive histology, part 1 (Web handout and Ex: 10.1 and 10.2)
Mar 3, Monday	Digestive histology, part 2 (Web handout and Ex: 10.1 and 10.2)
Mar 5, Wednesday	Digestive system enzymes (Web handout and Ex: 10.2)
Mar 10, Monday	Vision sense (Ex: 3.5)
Mar 12, Wednesday	Electrocardiogram (ECG) (Web handout and Ex: 7.2)

<u>Date</u>	<u>Topic and Laboratory Exercises</u>
Mar 17, Monday	<b>Midterm 2</b>
Mar 19, Wednesday	Blood pressure (Ex: 7.6)
Apr 2, Wednesday	Heart sounds (Web handout and Ex: 7.5)
Apr 7, Monday	Red Blood Cell counts (Web handout and Ex: 6.1)
Apr 9, Wednesday	Blood clotting system (Web handout and Ex: 6.4)
Apr 14, Monday	<b>Midterm 3</b>
Apr 16, Wednesday	White blood cell counts, part 1 (Web handout and Ex: 6.2)
Apr 21, Monday	White blood cell counts, part 2 (Web handout and Ex: 6.2)
Apr 23, Wednesday	Blood typing (Ex: 6.3)
Apr 28, Monday	<b>Midterm 4</b>
Apr 30, Wednesday	Introduction to respiratory system (lecture only, no exercise)
May 5, Monday	Respiration and spirometry (Web handout and Ex: 8.1)
May 7, Wednesday	Respiration and blood pH (Web handout and Ex: 8.4)
May 12, Monday	Introduction to urinary system (lecture only, no exercise)
May 14, Wednesday	Clinical examination of urine, part 1 (Web handout and Ex. 9.3)
May 19, Monday	Clinical examination of urine, part 2 (Web handout and Ex. 9.3)
May 21, Wednesday	<b>Final Exam</b> 2:40 pm – 5:50 pm

**In case of Emergency**

In the event of a life-threatening emergency call 911.

To report a non-life threatening incident, safety hazard, or a suspicious activity please contact campus security at (831) 755-6888. From a campus line, dial 6888.

To obtain campus status information, call the campus safety and facilities emergency status bulletin telephone number: 831-796-6222. From a campus line, simply dial 6222

Please visit Hartnell's emergency reporting link here:

<http://www.hartnell.edu/reporting-emergencies>

Non-emergency police business. . . . .831-758-7321

**NON-LIFE THREATENING INCIDENTS, INJURIES OR ILLNESS**

During school hours call Campus Safety 831-755-6888

After school hours call 831-755-6888

**UTILITY FAILURE**

During school hours call the Facilities Office at x6950 or 831-755-6950

After school hours call 831-755-6888

**ANY INCIDENT WITH POTENTIAL FOR ADVERSE PUBLICITY TO THE COLLEGE**

Call President's Office, x6900 or 831-755-6900

After school hours call 831-755-6888

**DURING A CAMPUS EMERGENCY:**

During a campus emergency, you will generally be told to do one of two options, SHELTER IN PLACE or EVACUATE. When either of these are given, vehicle traffic coming onto campus will likely be turned away. Students are required to obey the directions of staff in a timely fashion.

**EMERGENCY TEXT NOTIFICATIONS**

In the event of an emergency, Hartnell College can contact you by email, text, and voice. Hartnell College has partnered with the Everbridge Mass Notification system to provide emergency notifications. The system is used to send emergency notifications to Hartnell faculty, staff, and students in the event of a campus emergency such as a campus closure or hazardous situation. The system will send notifications through email, voice calls, and text messaging.

Students: If you receive an emergency notification, please tell your instructor immediately.

Students: If you have knowledge of an emergency on campus, share it immediately. If you see something suspicious or potentially hazardous, let someone know.

If you have been notified that the campus has been closed because of an emergency, please do not proceed to the campus until you have confirmed that it is clear to enter the campus.

**Evacuation:**

Please note the exit(s) in the room. For evacuation, immediately heed official directions by proceeding calmly and quickly to an exterior assembly area as indicated by trained staff. Please stay back at least 200 feet from any building until the “all clear” command is issued. In the event of an alarm or safety threat, uniformed Hartnell personnel equipped with two-way radios--including security, and maintenance staff--have up-to-date information; they also have the authority to order either shelter-in-place or immediate building evacuation.

**Shelter In Place:**

A shelter in place order is when personnel are told not to leave their immediate area. Shelter in place means that personnel should stay where they are. This could be for safety from an environmental threat, like a chemical leak off campus, to a threat of violence on campus. A LOCKDOWN is a shelter in place. In the event of an alarm or safety threat, uniformed Hartnell personnel equipped with two-way radios--including security, and maintenance staff--have up-to-date information; they also have the authority to order either shelter-in-place or immediate building evacuation.

**Lockdown**

A lockdown is a Shelter in Place. In the event of a safety threat, instructors and staff will lock classroom doors and direct occupants to stay clear of windows. Occupants are requested to remain quiet. During this time, DO NOT access any exits unless directed by first responders or staff.

In the event of an alarm or safety threat, uniformed Hartnell personnel equipped with two-way radios--including security, and maintenance staff--have up-to-date information; they also have the authority to order either shelter-in-place or immediate building evacuation.

**Run, Hide, Fight:**

In the event of an Active Shooter Event, there are three things you need to know in order to survive:

Run, Hide, Fight.

[Ready.gov](http://Ready.gov) Active Shooter Website

**RUN**

Have an escape route and plan in mind  
Leave your belongings behind  
Keep your hands visible

**HIDE**

Hide in an area out of the shooter's view  
Block entry to your hiding place and lock the doors  
Silence your cell phone and/or pager



## **FIGHT**

As a last resort and only when your life is in imminent danger

Attempt to incapacitate the shooter

Act with physical aggression and throw items at the active shooter

## **AFTER**

Keep hands visible and empty

Know that law enforcement's first task is to end the incident, and they may have to pass injured along the way.

Follow law enforcement instructions and evacuate in the direction they come from.

Officers may be armed with rifles, shotguns, and/or handguns and may use pepper spray or tear gas to control the situation.

Officers will shout commands and may push individuals to the ground for their safety.

Consider seeking professional help for you and your family to cope with the long-term effects of the trauma.

Helping the Wounded

Take care of yourself first, and then you may be able to help the wounded before first responders arrive:

If the injured are in immediate danger, help get them to safety.

While you wait for first responder to arrive, provide first aid- apply direct pressure to wounded and use tourniquets if you have been trained to do so;

Turn wounded people onto their sides if they are unconscious and keep them warm.

## **EMERGENCY PREPAREDNESS:**

The first 72 hours of a disaster are often the most difficult, but this period can be less stressful if everyone has extra supplies on hand. The college has a limited amount of emergency supplies, so students and staff should have on campus their own portable emergency kit including snacks, water, and prescription medication; this is especially important for those who may need to shelter on campus.

[Ready.gov lists essential 72 Hour Kit Components here](#)

## **REPORTING SUSPICIOUS BEHAVIOR:**

If you see suspicious behavior on campus, please contact [Campus Safety](#)

## **ANONYMOUS REPORTING OF INCIDENTS OR CONCERNS:**

Hartnell's Behavioral Intervention Team (BIT) accepts and processes anonymous reports from anyone about incidents or concerns on our campus. Please visit the [Behavioral Intervention Team website](#) for more information.

**REPORTING FORMS:**

Public Incident Report Form

Use the [Public Incident Report form](#) for:

Student Conduct Violations

Academic Integrity Issues

Student Complaints or Grievances

CARE Form

Use the [CARE form](#) for:

Concerns about Well-being

Mental Health Concerns

Unusual or Disruptive Behavior

**USEFUL LINKS:**

[Campus Maps and Directions](#)

[Emergency online resources](#)

[Campus Safety Policies](#)

[Hartnell's Emergency Alert System](#)

[Hartnell Emergency Action Plan 2017 - 2018](#)

**DSPS:**

The Department of Supportive Programs and Services (DSPS) coordinates academic accommodations for students with documented disabilities at Hartnell College. If you have, or suspect you may have, a disability that impacts your education, please contact the DSPS Office to determine your eligibility for accommodations. DSPS is located in the Student Services Building B, Room 107 (831) 755-6760. I encourage you to meet with Michelle Peters, Director of DSPS, to discuss your specific accommodations and to have test proctoring forms signed 5 days in advance.