

Human Body Systems 2026-2027

Tuesday and Thursday 2:50 pm - 4:20 pm

Teacher: Mr. Lance Heinemann	Grade Level: 10th
Email: lheinemann@guhsd.net	Grades: Jupiter
Textbook: Provided through Google Classroom	Website: Google Classroom

Course Description:

This Course explores the structures and functions of the human body, emphasizing how body systems work together to maintain homeostasis. Students will study the anatomy, physiology, and integration of the body's major systems through hands-on labs, data analysis, and collaborative problem-solving. Students will apply critical thinking to understand how disease, dysfunction, and adaptations affect the human body. Major units of study are at the end of this syllabus.

Class Materials:

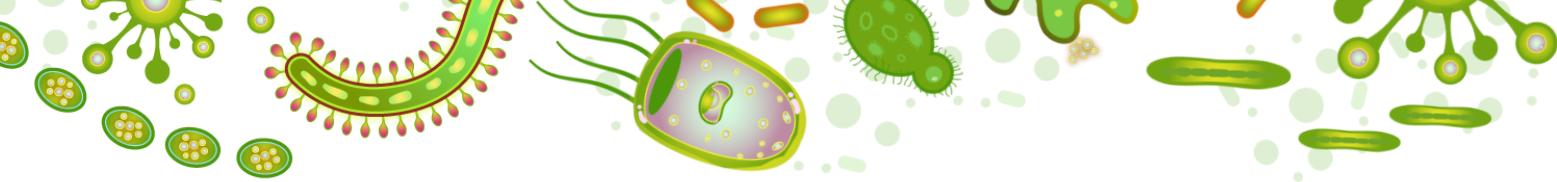
- Reading provided via Google Classroom
- 3-Ring Binder with Lined Paper or Notebook
- Colored pens or pencils for diagrams and annotations
- Laptop or tablet

Grading Categories:

Percentages represent the weight of each category towards the final grade.

- Tests and Exams – 25%
- Labs and Reports – 15%
- Homework – 25%
- Group Work, Participation, and Projects – 20%
- Final Project – 15%

Exams will assess understanding of lecture material and scientific reasoning through multiple choice, true/false, short answer, modeling, and essay questions.



Homework will reinforce concepts learned in class and prepare students for labs and exams. Assignments will include critical thinking questions and application of physiological concepts to health scenarios such as disease, injuries, or clinical cases.

Labs include a pre-lab setup, notebook data entries, digital experimental reporting (graphs), and post-lab analysis. Lab reports must be original and properly cited.

Participating includes attendance, involvement in classroom discussions, and contributions to group work.

Late Work:

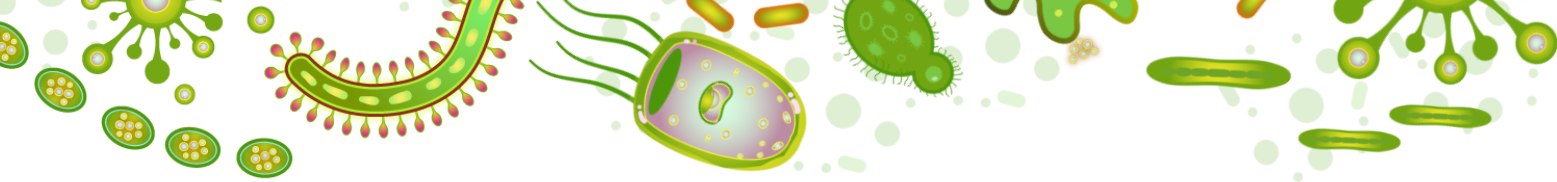
The expectation is that assignments are turned in on time as it becomes difficult to keep up if you are not up-to-date. However, late work will be accepted with an academic penalty. Students must turn in late work by the assessment we are currently working on. These dates will be highlighted in the agenda, but it is also the students responsibility to keep track. Please send Mr. Heinemann a friendly reminder if late work has not been graded in a timely manner (sometimes I'll forget).

Academic Honesty & Artificial Intelligence (AI) Policy

Students are expected to practice honest, responsible behavior and submit original work. Academic dishonesty—including traditional cheating, unauthorized collaboration, and AI misuse—will not be tolerated.

What Constitutes Academic Dishonesty?

- **Plagiarism & AI Misuse:** Using Artificial Intelligence tools (e.g., ChatGPT, Gemini, etc.) to generate work and submit it as one's own; copying text, data, or ideas from internet sources or another student without proper citations.
- **Unauthorized Collaboration:** Sharing work, notes, or answers without explicit teacher permission.
- **Cheating & Fabrication:** Copying during tests/assessments, or inventing dates, sources, or citations.



Classroom and Lab Safety:

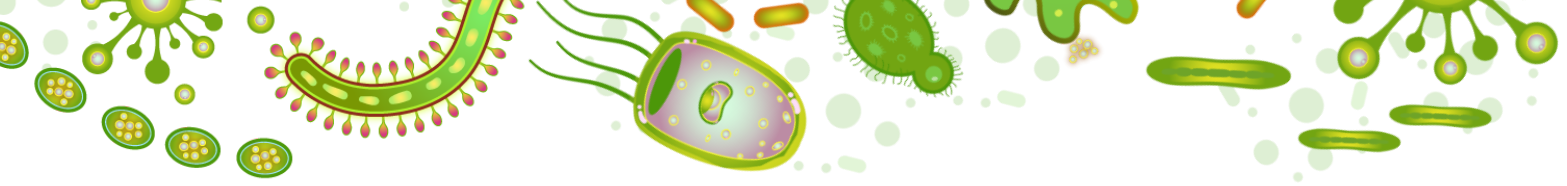
- Carefully read all instructions and safety guidelines before working on any lab.
- Do not touch any lab equipment or materials without teacher permission.
- No horseplay, nothing is a toy. Violations of this rule may result in a zero and/or referral.
- No food or drinks in the classroom during a lab. If you really need to, ask Mr. Heinemann for permission to eat outside.
- Always wash your hands after a lab and keep your lab station clean. A messy station may result in lost credit.
- Always report injuries or accidents to a teacher immediately.
- Dress appropriately for labs, you may have to tie up long hair and tuck away dangling jewelry. Goggles must be worn at all times when necessary.
- If you are not sure how something works (such as where to dispose of a chemical), ask questions, I am happy to help!

Student Support:

When possible, I am happy to remain after class and offer any support students may need. Other than that, I am always available by email and generally respond within a day. If required, I can also set up Zoom meetings.

Major Units of Study:

- Unit 1 - Introduction to Human Body Systems
 - Levels of biological organization
 - Homeostasis and feedback loops
 - Biomolecules and cell structure
- Unit 2 - Communication and Control
 - Nervous system (neuroanatomy, signaling, and reflexes)
 - Endocrine system (hormone regulation and signal transduction)
- Unit 3 - Structural Support and Movement
 - Skeletal and muscular systems
 - Sliding filament theory
 - Disorder and injuries



- **Unit 4 - Circulation, Immunity, and Gas Exchange**
 - Cardiovascular system (heart anatomy, pressure/volume loops)
 - Blood flow and lymphatic system
 - Respiratory system and gas laws
- **Unit 5 - Nutrient Absorption and Waste Removal**
 - Digestive system (motility, enzymes, absorption)
 - Urinary system (filtration, secretion, reabsorption)
- **Unit 6 - Reproduction and Development**
 - Male and female reproductive systems
 - Hormonal regulation of gametogenesis and cycles