

BIOLOGY 5 PROPOSED SYLLABUS FALL 2021

INTRODUCTION TO HUMAN BIOLOGY (4 UNITS)

Section No: 19826	Lecture	online	via prerecorded videos
19827	Lab	M 9:40 -12:50 pm	in AHS 243
<u>or</u> 24723	Lab	T 9:40 -12:50 pm	in AHS 243

Instructor: Dr. Houri Manoukian

Email: manoukha@lavc.edu and via Canvas inbox

Office Hours: W 9:00 - 9:40am and 12:50-3:10pm

Th 9:00 - 11:35am

(I will be available via Canvas chat during office hours, as well as Zoom by request. I try to respond to emails and Canvas inbox messages within 48 hours.)

Required Textbook: Human Biology: Concepts and Current Issues, by Michael D. Johnson 8th Ed. (ISBN: 9780134042435), loose-leaf copy (ISBN: 9780134154008) or a digital copy of the textbook (ISBN 9780134312699)

Lab Manual: This class does not have a lab manual. Labs will be posted on Canvas on the Lab Schedule page and must be printed and brought with you to lab class each week.

Required Supplies: 1 package of Scantron Form No. 882-E (50 answers per side for tests), #2 pencils, eraser, colored pencils, gloves, and lab coat.

Required Resources:

1. Computer with reliable internet access
2. Printer access
3. **Canvas:** an online learning platform. You will log on to the website daily to check for announcements and access lecture videos. The chat and zoom link to office hours will be available here, as well as the syllabus, handouts, and labs. Canvas may be accessed at lavc.edu/canvas or through the college website, lavc.edu, under the “online classes” tab. Your **username & password** will be the same as what you use for the Student Information System (SIS) Student Portal to enroll for classes.
4. In the case of a future lock down, or any other emergency campus closure, during this semester all subsequent exams will be taken on Canvas and the following resources will also be required:
 - a. Webcam and Microphone
 - b. **Proctorio:** a comprehensive learning integrity platform available to be downloaded from Canvas. This will be an extension to your Chrome browser and is a requirement to take any online exam, should there be a need.

Course Prerequisite: None

Course Description: This course includes basic biological principles as they apply to humans and will provide a foundation for advanced courses in Human Anatomy, Physiology, and Microbiology. Topics include chemical principles, the cell, heredity, human anatomy and physiology, microbiology, pathology, ecology, and bioethics.

IGETC: The course, Biology 5, meets UC/CSU GE requirement of natural science with a lab.

Financial Aid: Financial aid is available. The Financial Aid office is located on the first floor of the Student Services Center and may be contacted by phone at (818) 947-2412. More information is available on their website (lavc.edu/financialaid/index).

Accommodations (SSD & Religious): If you require accommodations, you must inform the instructor in writing as soon as possible. If your accommodations are for religious purposes, you must also provide written documentation from your clergy. If your accommodations are for a disability you must register with the college's Disabled Student Services. Once I receive a memo from the SSD office, we must discuss it immediately to make the appropriate arrangements. Accommodations will become effective after I receive a written notice from you and supporting documentations. The SSD office is located in room 175 in the Student Services Annex and may be contacted by phone at (818) 947-2681 or TTD (818) 947-2680. More information is available on their website (lavc.edu/ssd).

Wearing Masks/Facial Covering on Campus: In compliance with Health Orders from the Los Angeles County Department of Public Health, the Los Angeles Community College District, Board Policy 2800, approved August 4, 2021, all students, employees, and visitors, regardless of vaccination status, shall wear a mask or face covering while inside any District building, classroom, library, gymnasium, facility or other indoor setting. These requirements are in place to fulfill the Board's statutory obligation to protect its students, faculty, employees, and visitors from the risks associated with the spread of infectious diseases, including the spread of the COVID-19 virus and its variants.

Students who fail to wear a mask/face covering while indoors at all LACCD colleges and facilities, including classrooms, will be asked to either comply or to leave the classroom immediately. Continued failure to comply constitutes a violation of the Student Code of Conduct as outlined in Board Policy 5500 and students may be subject to further disciplinary action. Pursuant to Education Code Section 76032, students may be removed from class for up to two (2) class sessions for refusing to wear the mask/face coverings required by this Board Policy. Further or repeated offenses may result in discipline pursuant to Education Code, Board Rules, and Board Policy.

Exceptions to the mask/facial covering requirement are that the student has a valid medical exception currently on file in their college's Disabled Student Programs and Services / Office of Special Services (DSPS/OSS) office, such as a medical condition, including mental health or disability, that prevents wearing a mask, or, for students who are hearing impaired or communicating with a person who is hearing impaired, where the ability to see the mouth is essential for communication. To facilitate sign language use in the classroom, faculty and sign-language interpreters may remove their face covering for instruction purposes only. In such cases, faculty and interpreters must maintain six feet of distance from all others in the classroom. Should any student have an approved exemption from wearing a mask/face covering, they must also maintain six feet of distance from all others.

Board Policy 2800: <http://go.boarddocs.com/ca/laccd/Board.nsf/goto?open&id=C5LNV612301>

Board Policy 5500: <http://go.boarddocs.com/ca/laccd/Board.nsf/goto?open&id=C54M4A560575>

Board Action August 4, 2021:

<http://laccd.edu/Documents/NewsDocuments/2021/LACCD%20Board%20Adopts%20Policies%20Regarding%20Masking%20and%20Vaccinations%20August%204%20Screen.pdf>

LAVC Safe App: In addition to following the mask/ facial covering requirement outlined above, anyone entering campus must fill out a COVID-19 Self-Assessment which can be easily accessed via the LAVC Safe App or by clicking on "LAVC" on the district website at

<http://laccd.edu/About/News/Pages/Self-Check-Survey-Landing.aspx>

For step-by-step instructions on accessing the self-assessment via the LAVC Safe app, you may refer to the following flyer <https://www.lavc.edu/Coronavirus/document-library/docs/SAFE-App-Download-and-Check-in-Flyer-LAVC.pdf>

Please note that our lab classroom, AHS 243, is located in the Allied Health Science **Building "B."**

Attendance: Attendance will be taken at the beginning and end of each laboratory period. If you are absent when roll is called and do not notify me when you have arrived, you will be marked absent for that class session. Three cases of tardiness is equivalent to one absence. Additionally, the lecture portion of this class requires 3 hours 10 minutes of attendance per week for which you will log on to Canvas to access and watch lecture videos. Attendance for the lecture portion will be determined based on your activity log on Canvas, where insufficient activity will be marked towards absences. Absence and tardiness to lecture/lab, including leaving lecture/lab early, can have an adverse effect on a student's grade. Any student may be excluded from the class when more than 6 hours of lecture and/or lab time has been missed. If you choose to withdraw from the course, it is your responsibility to do so by the appropriate dates, to avoid an "F" grade. Do **not** expect the instructor to exclude you. Enrolled students who do not attend the first class meeting will forfeit their right to a place in the class and will be excluded as a no show.

Grading: The grade earned for this class will be 75% from lecture and 25% from lab. There will be a total of 6-unit exams. Each exam is worth 75 points and scheduled at the start of lab. The 6th unit exam will be scheduled during finals week and will be your final exam. The final exam will not be cumulative. Spelling counts on all exams. Lab points will come from weekly lab reports and unannounced/ pop quizzes. Lab reports are due upon completion, at the end of each week's lab. (See tentative lecture and lab schedule for exam and lab report due dates.) Please keep all returned materials until the end of the semester in case you need to question your grade. The one lowest lab report score will be dropped. Late lab work will not be accepted, and the student will earn a "0" for that day's laboratory points. Extra credit points are available on each exam. Grades will not be curved and will follow the grade scale below.

Point Distribution:

5-unit exams (75pts/exam)	375pts
Final exam (6 th unit exam)	75pts
Lab: Weekly Reports (14-15)	130pts
<u>Lab: Unannounced quizzes (2-5)</u>	<u>20pts</u>
Total	600pts

The point and letter grade distribution are as follows:

A	90-100%	(540-600pts)
B	80-89%	(480-539pts)
C	65-79%	(390-479pts)
D	55-64%	(330-389pts)
F	<55%	(329 & below)

Recommendations to pass this class: 10 to 12 hours of home study each week (in addition to the 6 hours a week spent attending lab classes and viewing lecture videos).

Make-up Exams & Quizzes: There will be **no** make-up opportunities for missed exams or unannounced/ pop quizzes. Missed exams & quizzes will be marked a "0."

Lab Reports: You must have your lab printed and with you for each lab, as well as be present and participate for each lab to receive full credit for the lab report. Lab reports are due upon completion, at the end of each week's lab, see lab schedule for dates. Late lab work will not be accepted, and the student will earn a "0" for that day's laboratory points. No make-up opportunity will be allowed for missed labs. The one lowest lab report score will be dropped. If more than one lab is missed, you will receive a "0" for those missed lab reports.

Academic Honesty: Students are expected to abide by the College's Academic Honesty Policy. Cheating is **NOT** tolerated. Any student caught cheating (i.e. obtaining test answers from classmates, using notes, assisting classmates, talking, looking, etc.) during any exam will be asked to leave the classroom for the remainder of the class session and will be given a score of 0 on that exam. In addition, a record of this cheating will be reported and placed in the student's permanent file. Do **NOT** turn in identical lab activities or exercise. This will be considered cheating and will not be tolerated. Please do not copy exact words or sentences from books, the computer, or other sources. Plagiarism is prohibited.

Exam Policy: Students are required to print legibly on all exams. Hats, of any type, are **NOT** permitted during exams. **NO** electronic devices of any type are allowed on your person or area during testing. Additionally, these devices must be turned **OFF** during exams. Failure to comply will constitute cheating with further action taken. Once an exam has begun, there will be no restroom breaks. You must turn in your exam before you leave the room. You will not be able to return to the exam once you leave.

Electronic Devices: Laptops and tablets are encouraged to be used in class but will be used for note taking **ONLY**. Anyone caught using an electronic device for purposes unrelated to class, will **NOT** be permitted to use any electronic device for the remainder of the class. The use of cell phones is **NOT** permitted during class at any time. All electronic devices must be switched to silent or vibrate during class. **NO** visual or audio recording of any kind may be utilized in class, without the instructor's prior consent. This includes taking pictures of board notes. To promote learning, students are encouraged to write out board notes.

Classroom/Laboratory Room Rules: Food and drinks are **NOT** permitted in the classroom/lab at any time. Proper attire must be worn in laboratory at all times, including closed-toe shoes and clothing covering the body from neck to knees. Long hair must be tied back, and loose jewelry removed. Anyone not dressed appropriately will be excluded from participating in that lab. It is your responsibility to leave the classroom/laboratory cleaner than you found it, especially during particular labs that tend to get messy.

Laboratory Procedures:

1. Work individually. Use the laboratory lectures, textbook, and the laboratory handouts to complete the lab assignments and learn lab information.
2. The use of safety glasses, provided in lab, is required during labs involving chemicals.
3. You may want to bring gloves.
4. No student is allowed to remove materials from the classroom at any time.
5. At the end of class, stop all work and clean up (Put away all materials, wipe down your area, push in all chairs, throw away waste around the room.)
6. **DO NOT** put any caustic chemicals in the sink.
7. Food and drinks are **NOT** allowed in the classroom/lab.

Any student not following these rules will lose points from their total at the end of the semester.

Standards of Student Conduct: Stealing is very serious and can result in disciplinary action. **Harassment** of any kind or the use of **defamatory** remarks is not tolerated. Please inform the instructor immediately if any of the above situations has occurred.

Smoking Policy (also discussed in the schedule of classes): LAVC is now an entirely non-smoking campus. Smoking is not allowed anywhere on school grounds. Anyone who wishes to smoke must leave the campus to smoke on the public sidewalk.

No Students in the AHS "Backyard": The "backyard" is a classroom. Please do not enter the area.

Student Learning Outcomes:

Course Level	Lab: Identify major organs and examine functions of the digestive system. Examine role of enzymes in digestion.	Lecture: Compare and contrast basic biological principles of living organisms including the biochemical basis of life, the cell, plasma membrane structure and its role in cell transport, osmosis and diffusion and the universal nature of the genetic code.
Student Learning Outcome		
Assessment Activity	The student will be asked to identify structures with the human digestive system using a diagram or model and state what the function of each is.	The student will be asked to describe the structure of the plasma membrane and/or identify components in a diagram and discuss the membrane's role in transportation of materials through the cell.
Assessment Measure	A separate quiz or embedded assessment questions will be given.	A separate quiz or embedded assessment questions will be given

Course Objectives:

Lecture

1. Apply the scientific method and design experiments. Analyze the role of statistics in evaluation of experiments in biology and medicine. Describe hierarchical organization of living systems.
2. Compare and contrast basic biological principles of living organisms including the biochemical basis of life, the cell, plasma membrane structure and its role in cell transport, osmosis and diffusion and the universal nature of the genetic code.
3. Define and distinguish anatomy and physiology of organ systems. Understand homeostasis and negative feedback. Discuss the evolution of the human body.
4. Describe the disease process and how the human immune system defends against these processes.
5. Summarize ecological systems. Examine bioethics in current biological topics (e.g., stem cell research).

Laboratory

1. Laboratory and safety procedures in conducting biological experiments. Employ the metric system of measurement to measure length, mass, and volume.
2. Apply the basic principles of the scientific method.
3. Demonstrate graphing and analysis of laboratory data using statistics including mean, median and standard deviation. Demonstrate computer simulations of physiological processes.
4. Explain the parts of the microscope, use it properly and create a wet-mount slide for examination.
5. Identify cellular structures and histological specimens.
6. Apply aseptic technique. Demonstrate plating and growth of bacteria on media.
7. Compare and contrast differential permeabilities across natural and artificial membranes.
8. Demonstrate negative feedback.
9. Identify major bones and examine functions of the skeletal system. Identify major muscles and examine functions of the muscular system. Identify major organs and examine functions of the digestive system. Examine role of enzymes in digestion. Identify major organs and examine functions of the nervous system, cardiovascular system, urinary system, respiratory system, integumentary and endocrine systems.
10. Show separation and identification of DNA fragments using electrophoresis technology.

Deadline to drop a 16-week class without a “W”: September 12th, 2021

Deadline to withdraw from a 16-week class with a “W”: November 21st, 2021

It is your responsibility to withdraw by the appropriate dates, to avoid an “F” grade.

Tentative Lecture & Lab Schedule: Topics, assigned reading & lab work are noted below.

Date		Unit	Lecture Topic	Book Chap.	Lab Topic
Wk 1	8/30 8/31	1	Introduction & General Science Chemistry: Atoms, Chemical bonds & Organic molecules	1-2	Lab 1: Metric System & Scientific Method
Wk 2	9/6 9/7	1	Cell Structure & Function Cellular Respiration	3	Lab 2: Properties and Functions of Cells Mon. (9/6) No Class Labor Day
Wk 3	9/13 9/14	2	DNA: Structure, Control, Replication Protein Synthesis: Transcription & Translation	17	Lab 3: Microscope & Cellular Respiration/ Fermentation
Wk 4	9/20 9/21	2	Unit 1 Exam (Ch 1-3) Cell Division: Mitosis & Meiosis Genetics	17 19	Lab 4: Cell Division & Genetics
Wk 5	9/27 9/28	3	Introduction to Human Anatomy & Physiology Tissues & Integumentary System	4	Lab 5: Introduction to Tissues & Integumentary System
Wk 6	10/4 10/5	3	Unit 2 Exam (Ch 17 & 19) Skeletal & Muscular System	5, 6	Lab 6: Skeletal & Muscular Systems
Wk 7	10/11 10/12	3	Nervous System	11, 12	Lab 7: Nervous System
Wk 8	10/18 10/19	4	Unit 3 Exam (Ch 4-6, 11-12) Cardiovascular System	8	Lab 8: Cardiovascular, Respiratory & Digestive Systems
Wk 9	10/25 10/26	4	Respiratory System Digestive System & Nutrition	10, 14	Lab 9: Urinary, Reproductive & Endocrine Systems
Wk 10	11/1 11/2	4	Urinary System Male & Female Reproductive Systems Endocrine System	15, 16, 13	Lab 10: Blood & Immune System
Wk 11	11/8 11/9	5	Unit 4 Exam (Ch 8, 10, 13-16) Blood & Lymphatic/Immune System	7, 9	Lab 11: Introduction to Human Pathogens
Wk 12	11/15 11/16	5	Pathogens Resistance to Disease/ Lines of Defense	9	Lab 12: Microbes are everywhere
Wk 13	11/22 11/23	5	Immune Disorders: Hypersensitivity (Autoimmune Disorders & Allergies) & Hyposensitivity Infectious Diseases	9	Lab 13: Effectiveness of Handwashing & Alcohol Sanitizers

Wk 14	11/29 11/30	6	Unit 5 Exam (Ch 7, 9) Ecology: Introduction & Biomes, Population, Community	23, 24	Lab 14: Ecology
Wk 15	12/6 12/7	6	Ecology: Ecosystem, Chemical Cycling Bioethics	23, 24	Lab 15: Bioethics
Wk 16	12/13 12/14	Final (Unit 6) Exam (Ch 23, 24) in AHS 243 Monday, December 13th, 2021 from 9:30-11:30 am (sec# 19827) Tuesday, December 14th, 2021 from 9:30-11:30 am (sec # 24723)			

All exams will be taken in person during lab.
Unit Exams 1-5 are all scheduled at the start of lab at **9:40 am**.
Section # 19827 will meet on Mondays for labs and exams.
Section # 24723 will meet on Tuesdays for labs and exams.