HOUSTON COMMUNITY COLLEGE

Division of Earth, Life & Natural Sciences
Biology Department
https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/biology/

BIOL 1306: General Biology | Lecture | #11066

Spring 2020 | 16 Weeks (1.21.2020-5.17.2020)
In-Person | Central LHS 315 | MW 3:30 p.m.-4:50 p.m.
3 Credit Hours | 48 hours per semester

Instructor Contact Information

Instructor:	Donald Parker, M.D.	Office Phone:	713-718-6127
Office:	Suite 215 Cubicle 222.12	Office Hours:	M/W 11:00 a.m.-12:00 p.m.
HCC Email:	donald.parker@hccs.edu	Office Location:	Central, San Jacinto Building

Please feel free to contact me concerning any problems that you are experiencing in this course. Your performance in my class is very important to me. I am available to hear the concerns and just to discuss course topics.

Instructor's Preferred Method of Contact

Please contact me via **Canvas Email**, as it is my preferred method of communication. Also, my school email is donald.parker@hccs.edu if needed. I will only respond if you use your school email when communicating with me. In your profile, please correct your address and notification alerts. I cannot respond to your personal email address. Typically, I will respond to emails within 24-48 hours Monday through Friday; I will reply to weekend messages during the following week.

What's Exciting About This Course

Biology is an endless adventure with constant new developments. Biology is the study of life. Perhaps, the first thing that comes to mind when you think about life on earth is humans and familiar animals. In this course, you will also learn about bacteria, fungi, plants and other life forms on earth. This course introduces students to the nature of life, including the chemical foundation of life; plants, animal, humans and bacterial cell structure and function; DNA, genetics and evolution. You will learn about the various techniques used to study biology; gene cloning, gene editing and the exciting field of Genetic Engineering.

My Personal Welcome

Welcome to General Biology—I'm delighted that you have chosen this course! One of my passions is to know as much as I can about living organisms, and I can hardly wait to pass that on to you. I will present the information in the most exciting way I know, so that you can grasp the concepts and apply them now and hopefully throughout your life.

As you read and wrestle with new ideas and facts that may challenge you, I am available to support you. The fastest way to reach me is via Canvas Email. The best way to really discuss issues is in person and I'm available during posted office hours to tackle the questions. My goal is for you to walk out of the course with a better understanding of yourself and of human life. So please visit me or contact me by email whenever you have a question.

Prerequisites and/or Co-Requisites

Recommended prerequisite: MATH 1314 or 1414 Successful completion of College Algebra or concurrent enrollment in higher-level mathematics is recommended.

Recommended co-requisite: BIOL 1106 Biology for Science Majors I (lab)
Please carefully read the repeater policy in the HCCS Student Handbook.

Canvas Learning Management System

All Biology sections utilize Canvas (https://eagleonline.hccs.edu) to supplement in-class assignments, exams, and activities.

Open Lab Locations

HCCS Open Computer Lab locations may be used to access the Internet and Canvas. **USE FIREFOX OR CHROME AS THE INTERNET BROWSER**.

In our efforts to prepare students for a changing world, students may be expected to utilize computer technology while enrolled in classes, certificate, and/or degree programs. The specific requirements are listed below:

1. You will need a laptop or access to a laptop with webcam that is not a Chrome Book every class. Chrome Book does not work with LockDown Browser which you will have to download to take exams in this course.
2. Download Lock Down Browser by the completion of the first day of class. Directions and link below.
3. Access Canvas for assignments, PowerPoints, lecture notes, MasteringBiology textbook online assignments, quizzes, and exams.
4. Register for Pearson MasteringBiology via Canvas by the end of the first day of class. This is where all your homework will be located

HCC Online Information and Policies

For online/hybrid students. As an online /hybrid student, you are responsible for all information/requirements provided by the online college. Here is the link to information about

HCC Online classes http://www.hccs.edu/online/. This includes the mandatory online course prior to start of class.

Scoring Rubrics, Sample Assignments, etc.

When applicable, look in Canvas for the scoring rubrics for assignments, samples of class assignments, and other information to assist you in the course.
https://eagleonline.hccs.edu/login/ldap

ASSESSMENT RUBRICS GENERAL BIOLOGY I - BIOLOGY 1306

Performance Factors	F	D	C	B	A
1] The student will be able to recognize the basic structure and describe the function of eukaryotic cellular organelles and cell systems.	Unable to demonstrate knowledge of shape, structure, or function of most eukaryotic cellular organelles. Unable to correlate organelles with their cell systems.	Occasionally able to demonstrate knowledge of shape and structure, or function of a few eukaryotic cellular organelles and cell systems.	Occasionally able to demonstrate knowledge of shape and structure, or function of most eukaryotic cellular organelles and cell systems.	Consistently able to demonstrate knowledge of shape, structure, and function of most eukaryotic cellular organelles and cell systems.	Consistently able to demonstrate knowledge of shape, structure, and function of all eukaryotic cellular organelles and cell systems
2] Given a DNA or RNA base sequence, the student will be able to deduce: a. the sequence of the complementary DNA strand b. the sequence of the complementary messenger RNA strand c. complementary codons and/or anticodons d. the proper amino acid sequence in a peptide by using a supplied table of genetic code.	Unable to demonstrate knowledge of base pairing rules. Unable to demonstrate the ability to perform replication and transcription and translation, by scenario.	Able to demonstrate knowledge of base pairing rules for DNA only. Able to demonstrate the ability to perform replication by scenario. Unable to demonstrate the ability to perform transcription or translation, by scenario.	Able to demonstrate knowledge of base pairing rules for both DNA and RNA. Able to demonstrate the ability to perform replication and transcription OR translation, by scenario.	Able to demonstrate knowledge of base pairing rules for both DNA and RNA. Able to demonstrate the ability to perform replication and transcription AND translation, by scenario.	Able to demonstrate knowledge of base pairing rules for both DNA and RNA. Able to demonstrate the ability to perform replication and transcription AND translation, by scenario without error.
	Unable to explain both	Able to explain the	Able to explain the	Able to explain the synthesis	Able to explain the synthesis of

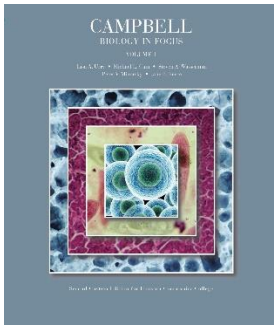
3] The student will be able to explain the synthesis and properties of a. carbohydrates b. lipids c. proteins d. nucleic acids	the synthesis of polymers and the properties of any class of biological macromolecule.	synthesis of polymers, and the properties of any one class of biological macromolecule.	synthesis of polymers, and the properties of any two classes of biological macromolecule.	of polymers, and the properties of any three classes of biological macromolecule.	polymers, and the properties of all four classes of biological macromolecule.
4] The student will be able to devise an experiment containing the proper experimental test points along with proper positive and negative controls.	Consistently cannot differentiate between appropriate and inappropriate experimental design, in practice or by scenario.	Occasionally differentiates between appropriate and inappropriate experimental design, but needs direction to proceed to next step.	Consistently differentiates between appropriate and inappropriate experimental design, but needs direction to proceed to next step.	Consistently differentiates between appropriate and inappropriate experimental design. Attempts to perform some appropriate corrective action or explain some appropriate action; needs some assistance from instructor.	Consistently differentiates between appropriate and inappropriate experimental design. Takes appropriate steps or explains appropriate steps independently and correctly.
5] The student will exhibit competence with bringing the bright-field microscope into focus.	Consistently unable to find the specimen on the microscope slide, and consistently unable to focus a microscope without the instructor's help.	Occasionally able to find the specimen on the microscope slide, but consistently unable to focus without the instructor's help.	Occasionally able to find the specimen on the microscope slide, and occasionally able to focus without the instructor's help.	Consistently able to find the specimen on the microscope slide, and occasionally able to focus without the instructor's help.	Consistently able to find the specimen on the microscope slide, and consistently able to focus without the instructor's help.
6] The student will develop the habit of reliable attendance by being absent from class no more than four times per semester.	Is absent frequently enough to interfere with instruction and the completion of the course objectives, and/or is frequently not where he/she	When absent, is never aware of the schedule for the day upon return, and must be reminded or encouraged to complete	When absent, is only occasionally unaware of the schedule for the day upon return. Completes objectives missed during the	When absent, independently or with little help completes objectives missed during the absence. Always aware of the schedule for	Is never absent, always aware of the schedule for the day, and is where he/she is expected to be at all times. Consistently and willingly follows HCC attendance

	is expected to be. Infracts the HCC attendance policies.	objectives missed during the absence. Is occasionally not where he/she is expected to be.	absence only with the help of the instructor and/or classmates, and is where he/she is expected to be at all times.	the day, and is where he/she is expected to be at all times.	policies without being reminded.
7] The student will demonstrate punctuality in the submission of class assignments on their due date.	Is tardy at turn-in frequently enough to interfere with class instruction. Submits assignments two or more weeks late, or ignores assignments.	Is tardy at turn-in frequently enough to interfere with class instruction or submits assignments no more than one week late.	Is occasionally a few minutes late for assignment turn-in. submits assignments no more than one day late.	Is rarely late for assignment turn-in. Submits assignments late, but on the due date.	Is consistently on time for assignment turn-in. Always submits assignments on the due date.

Instructional Materials

Required Resources

The textbook listed below is ***required*** for this course.



"Campbell Biology in Focus", Volume I with Modified Mastering Biology Package for Houston Community College" ISBN: 1323751432 //9781323751435

The book is included in a package that contains the text as well as an access code and are found at the HCC Bookstore. You may either use a hard copy of the book or rent the e-book from Pearson. Order your book here: HCC Bookstore

A **Laptop** with webcam is required for my course (Not a ChromeBook)

LockDown Browser + Webcam Requirement (For exams taken at home)

This course requires the use of LockDown Browser and a webcam for online exams taken at home. The webcam can be the type that's built into your computer or one that plugs in with a USB cable.
Watch this brief video to get a basic understanding of LockDown Browser and the webcam feature.
https://www.respondus.com/products/lockdown-browser/student-movie.shtml
Download Instructions
Download and install LockDown Browser from this link:
https://download.respondus.com/lockdown/download.php?id=355612798
Once Installed

- Start LockDown Browser
- Log into to Canvas
- Navigate to the quiz

Note: You won't be able to access a quiz that requires LockDown Browser with a standard web browser. If this is tried, an error message will indicate that the test requires the use of LockDown Browser. Simply start LockDown Browser and navigate back to the exam to continue.
Guidelines
When taking an online quiz, follow these guidelines:

- Ensure you're in a location where you won't be interrupted
- Turn off all other devices (e.g. tablets, phones, second computers) and place them outside of your reach
- Before starting the test, know how much time is available for it, and also that you've allotted sufficient time to complete it

- Clear your desk or workspace of all external materials not permitted - books, papers, other devices
- Remain at your computer for the duration of the test
- If the computer, Wi-Fi, or location is different than what was used previously with the "Webcam Check" and "System & Network Check" in LockDown Browser, run the checks again prior to the exam
- To produce a good webcam video, do the following:
    - Avoid wearing baseball caps or hats with brims
    - Ensure your computer or device is on a firm surface (a desk or table). Do NOT have the computer on your lap, a bed, or other surface where the device (or you) are likely to move
    - If using a built-in webcam, avoid readjusting the tilt of the screen after the webcam setup is complete
    - Take the exam in a well-lit room, but avoid backlighting (such as sitting with your back to a window)
- Remember that LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted

Getting Help

Several resources are available if you encounter problems with LockDown Browser:

- The Windows and Mac versions of LockDown Browser have a "Help Center" button located on the toolbar. Use the "System & Network Check" to troubleshoot issues. If an exam requires you to use a webcam, also run the "Webcam Check" from this area
- HCC help desk number is 713-718-8800. The help desks may want students to run the "System & Network Check" and the "Webcam Check" before they are contacted - and even, to forward the results of these checks at the time of opening a ticket.
- Respondus has a Knowledge Base available from support.respondus.com. Select the "Knowledge Base" link and then select "Respondus LockDown Browser" as the product. If your problem is with a webcam, select "Respondus Monitor" as your product

If you're still unable to resolve a technical issue with LockDown Browser, go to support.respondus.com and select "Submit a Ticket". Provide detailed information about your problem and what steps you took to resolve it.

Suggested Resources

HCCS Biology Lab Study Pages

Click here to access Biology lab study pages online.

OER: OpenStax (Free eText): https://openstax.org/details/books/biology-2e

Additional faculty suggested resource(s).

Bozeman Science: http://www.bozemanscience.com/biology-main-page
Crash Course: https://thecrashcourse.com/courses/biology?page=2
Amoeba Sister: https://www.youtube.com/playlist?list=PLwL0Myd7Dk1F0iQPGrjehze3eDpco1eVz

Other Instructional Resources

Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the HCC Tutoring Services website for services provided.

Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at http://library.hccs.edu.

Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at http://www.hccs.edu/resources-for/current-students/supplemental-instruction/.

Course Overview

BIOL 1306 is a course that covers fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of cytology, reproduction, genetics, and scientific reasoning are also included.
***** Use ACGM course description per course.**

Core Curriculum Objectives (CCOs)

- ***Critical Thinking***: Students will demonstrate the ability to engage in inquiry and analysis, evaluation and synthesis of information, and creative thinking by completing a written assignment such as a book report, research paper, or essay.
- ***Communication Skills***: Students will demonstrate effective development, interpretation and expression of ideas through written, oral, and visual communication by completing a written assignment such as a book report, research paper, or essay.
- ***Quantitative and Empirical Literacy***: Students will explore the scientific research methods that are used in the study of biology. They will learn to interpret numerical data in charts, graphs, and tables that are in their textbooks and other resources. Students should be able to carry out basic mathematical operations including calculating percentages and frequencies. In addition, students will complete textbook reading assignments and answer questions on quizzes and exams that pertain to Course Student Learning Outcome #2
- ***Social Responsibility***: Students will demonstrate the ability to engage effectively in class activities and discussions, complete textbook reading assignments, and answer questions on quizzes and exams that pertain to Course Student Learning Outcome #10 below.

***** Do NOT CHANGE the texts highlighted in red as All courses MUST address the first 2 CCOs, though you can remove the red color. Go to the HCC CCO link to determine more applicable objectives, if any**. Then delete this explanatory text.

Program Student Learning Outcomes (PSLOs)

Learning Objectives for each CSLO can be found at Learning Objectives for BIOL 1306

Course Student Learning Outcomes (CSLOs)

Upon completion of BIOL 1306, the student will be able to:

1. Describe the characteristics of life.
2. Explain the methods of inquiry used by scientists.
3. Identify the basic requirements of life and the properties of the major molecules needed for life.
4. Compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.
5. Describe the structure of cell membranes and the movement of molecules across a

membrane.
6. Identify the substrates, products, and important chemical pathways in metabolism.
7. Identify the principles of inheritance and solve classical genetic problems.
8. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
9. Describe the unity and diversity of life and the evidence for evolution through natural selection.
10. Develop critical thinking skills and habits of active collaborative learning.

Learning Objectives

Detailed Learning Objectives (HCC General Biology Subcommittee)

Understand and describe the 8 unifying themes of biology, including cell theory, metabolism, heredity, etc.
Understand the Theory of Evolution and how it is a core concept in biology
Describe the scientific method
Describe matter, chemical elements and compounds
Use examples to illustrate how the structure of an element's atoms determines its properties.
Identify different chemical bonds and use examples to show how bonds affect molecular shape.
Explain why water is a polar molecule and understand how this facilitates hydrogen bonding with other molecules
Explain/give examples of how the unique properties of water are critical to life and result from hydrogen bonding
Differentiate between an acid and a base; define pH and describe how it affects the processes of life.
Explain how the valence of carbon accounts for its versatility as a building block for biomolecules
Define isomers and be able to identify between the three different types
Describe the structure, properties and importance of the seven major functional groups in biomolecules
Describe how polymers are formed and the difference between dehydration synthesis and hydrolysis
Know structure/function of carbohydrates, including monosaccharides, di- and polysaccharides and their roles in biological systems

Know structure/function of lipids; why they are hydrophobic; the difference between saturated and unsaturated fat; role of phospholipids in membranes
Know examples/functions of different types of proteins; know basic amino acid structure/various types of R groups; know levels of protein structure
Know structure/ functions of nucleic acids; differences between DNA/RNA; nucleotide structure
Identify how common techniques in microscopy and biochemistry can be used to study cells (priority 4)
Compare (a) prokaryotic and eukaryotic cells; and (b) animal eukaryotes versus plant eukaryotes (priority 3)
Understand the roles of the nucleus, chromosomes, and ribosomes in the flow of genetic information in a cell (priority 5)
Identify parts of the endomembrane system in the cell and describe their roles (priority 2)
Compare the structures and functions of mitochondria and chloroplasts (priority 6)
Describe the subunits/structures of the 3 types of cytoskeletal fibers and their functions (priority 1)
Compare the (a) extracellular components of plant and animal cells; and (b) the cell junctions of plant and animal cells
Explain the Fluid Mosaic Model, describing the components of a membrane
Describe how membrane structure results in selective permeability
Use examples to demonstrate the processes of diffusion, osmosis, and facilitated diffusion i.e. passive transport
Describe the process of active transport
Identify the mechanisms of bulk transport
Compare and contrast anabolism and catabolism
Know different forms of energy: Kinetic, Heat, Potential, Chemical
Identify the first two Laws of Thermodynamics and explain how they relate to biological systems
Explain what is meant by G (free energy) and relate it to exergonic and endergonic reactions
Describe how ATP powers cellular work
Explain how enzymes speed up chemical reactions by lowering energy barriers
Describe how regulation of enzyme activity helps control metabolism
Define overall equation for cellular respiration as a catabolic pathway oxidizing organic fuels
Know the overall reaction/stages for cellular respiration with respect to: substrates and products, where it occurs in cell; if oxygen is required; the number of ATP produced
Understand why cellular respiration is a redox process
Define the role of oxygen in cellular respiration
Know the flow of electrons and energy from glucose to ATP in cellular respiration
Explain how the electron transport chain uses the energy from the electrons for synthesis of ATP
Know which stage of cellular respiration produces the maximum amount of ATP; and contrast this with fermentation
Know the two main stages of photosynthesis: inputs, outputs, products
Comprehend the energy flow between photosynthesis and cellular respiration
Describe the conversion of solar energy into chemical energy
Understand how the Calvin cycle converts chemical energy and CO2 into sugar (ie. Mass)
Understand the conversion of extracellular signals to intracellular responses - give examples
Know G Protein coupled receptors and their actions
Understand Kinases-external and internal receptors and their actions-reception of signals and kinase cascading

Explain how chromosomes duplicate and divide to form genetically identical daughter cells

Understand the phases of the cell cycle; the role of interphase; and the various phases of mitosis
Understand cancer cells and their loss of cell cycle controls
Describe the control mechanisms that regulate eukaryotic cell division
Describe the arrangement and types of chromosomes in a karyotype
Understand the role of meiosis in human sexual reproduction and life cycle
Describe how meiosis reduces chromosome number and brings genetic variation in gametes
Describe the mechanisms by which sexual reproduction brings genetic variation and its role in evolution
Identify/understand Mendel's two laws of inheritance.
Understand that the laws of probability govern mendelian inheritance
Be able to calculate probability of Mendelian genetics. Diagnose inheritance patterns and underlying genetic mechanisms.
Understand that Mendelian inheritance has its physical basis in the behavior of chromosomes
Know that sex linked genes exhibit unique patterns of inheritance
Explain how the linkage of genes affects inheritance
Understand that alterations of chromosome number or structure cause some genetic disorders
Recognize that some inheritance patterns are exceptions to standard Mendelian inheritance
Describe the structure of DNA
Know all of the steps and enzymes involved in DNA replication and repair
Distinguish the levels of chromatin packing in eukaryotic chromosomes
Explain transcription: including its location and important molecules involved
Trace the steps involved in eukaryotic RNA processing
Describe the process of translation and the molecules involved
Know that mutations can affect protein structure/function
Understand that the concept of a gene is universal
Explain how the Trp and Lac operons function
Describe the stages of eukaryotic gene expression and explain how they participate in regulating gene expression
Define "noncoding RNAs" and explain how they participate in regulating gene expression
Explain how differential gene expression leads to different cell types in a multicellular organism
Describe how cancer can result from genetic changes that affect cell cycle control
Describe a virus and how it replicates
Describe how viruses evolve into new viral diseases
Describe DNA cloning and the Polymerase Chain Reaction
Identify techniques that allow us to study the sequence, expression, and function of a gene
List some practical applications of DNA technology

Learning Objectives for each CSLO can be found at Learning Objectives for BIOL 1306

Student Success

Academic standards require a minimum of 3 study hours for every contact hour; meaning for a class that meets 3 hours per week, you need to budget and set aside a minimum of 9 hours each week to study and prep for your course success. Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook
- Attending class in person and/or online
- Timely completion of assignments
- Participating in class activities
- Successful exam performance, including the mandatory final

There is no short cut for success in this course; it requires reading and studying the material using the course objectives as a guide.

Refer to the syllabus for the last date. I urge any student who is contemplating withdrawing from the class to see me first! You may be doing better than you think. Either way, I want to be accessible and supportive. I do not believe in "weed out" classes, and I consider you to be much more than just a name or number! Note my office hours, above; if you need assistance, I'm here to help. It is the student's responsibility to withdraw from the class before the last day of withdrawal. The instructor cannot give a "W" after the withdrawal date. Abandoning the course or failing to formally drop, will result in a grade being given based on the work completed for the entire course (including missed exams).

To help students avoid having to drop/withdraw from any class, HCC has instituted an Early Alert process by which your professor will "alert" you that you might fail a class because of excessive absences and/or poor academic performance. The counselors with work with you to learn about what, if any, HCC interventions might be available to assist you – online tutoring, child care, financial aid, job placement, etc. – to stay in class and improve your academic performance.

Instructor and Student Responsibilities

As your Instructor, it is my responsibility to**:**

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- Provide the course outline and class calendar that will include a description of any special projects or assignments
- Arrange to meet with individual students before and after class as required

As a student, it is your responsibility to**:**

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Attain a raw score of at least 50% on the departmental final exam
- Be aware of and comply with academic honesty policies in the HCCS Student Handbook

Assignments, Exams, and Activities

Assignments

Mastering Biology: This is an online mandatory requirement in which the students complete various modules to further understand and increase knowledge of the content being presented in class. These must be completed by the designated time and WILL NOT BE ACCEPTED AFTER THE DUE DATE. These assignments are 15% of your grade and will help you tremendously if you complete them as directed**.** The Mastering Biology site can be reached via your Canvas Shell. Each student is responsible for registering on the mastering biology website using an access code. The access code comes with the new book.

Exams

There will be a minimum of 4 lecture exams, a departmental final exam and class final exam. Lecture exams will consist of multiple-choice questions, usually. They will cover material we cover in class, important concepts and discussion from the text book, as well as, figures from the text book. You will get a maximum of one hour or one and half-hour period to complete your lecture exam. The final exam will be comprehensive (it will cover all the chapters). There will be a departmental final and a class final that all students need to take. You will take 2 finals, one by the department 10% and one by your instructor 15%. The average of both final exams will be included in your final grade. The lecture exams will follow lectures. **No cell phones are allowed in use at any time in the classroom as it disturbs the class. Audible cell phone ringing may result in your removal from class that day. Cell phone or smart watch use during examination will be considered cheating and will result in course failure.**

All examinations will be based upon a 100% score. A minimum of four examinations will be given during the course of the semester. The average of these exams will comprise 40% of the final grade. A comprehensive Departmental Exit Exam, to assess your achievement in the course of instruction, will be given at the scheduled Final Exam date and will account for the remaining 10% of your final grade along with the class final exam which will account for 15% of your final grade. The lecture exams are multiple choice, essay or short answer, usually 50-80 questions each, and will be scored by laptop **(CAN NOT BE A CHROMEBOOK)** in Canvas or scantron when indicated by me. You must bring your own scantron answer card and a No.2 lead pencil with clean eraser to scheduled exams. There is no grading curve! However, there may be additional bonus questions on the lecture exams that could enhance your test score by 10 points, and ultimately nearly a letter grade for the semester. Be sure to arrive early for all scheduled exams as these have time limits. **Entering and exiting lecture room is not permitted once exams have begun (use restroom prior to exam) and all personal items must be placed at the front of the room, including our phone off and in your bag along with smartwatches. Close all apps and save all work on your laptop. Restart your laptop and connect to the internet and try connecting to HCCS.EDU, if successful, close browser and open LockDown Browser. No time extension is given for the exam so be ready once time to start the exam at the beginning of class.** There is no repeating of examinations or "dropping" of lowest grade/s. Please note: All students are required to take the final exam. Failure to take the final exam will result in an "FX" grade. There will be a minimum of 4 lecture exams, a departmental final exam and class final exam. Lecture exams will consist of multiple-choice questions, usually. They will cover material we cover in class, important concepts and discussion from the text book, as well as, figures from the text book. You will get a maximum of one hour or one and half-hour period to complete

your lecture exam. The final exam will be comprehensive (it will cover all the chapters). There will be a departmental final that all students need to take. You will take 2 finals, one by the department 10% and one by your instructor 15%. The average of both final exams will be included in your final grade. The lecture exams will follow lectures. No cell phones are allowed in use at any time in the classroom as it disturbs the class. Audible cell phone ringing may result in your removal from class that day. Cell phone or smart watch use during examination will be considered cheating and will result in course failure. HCC does not provide students with Scantron forms. They are sold in campus bookstores.

In-Class Activities

During this semester we will use the active learning, student centered learning concepts. With that being said, I will be a facilitator to your learning instead of being an expert lecturer. Prior to class, you will be expected to have read the chapter, taken Cornell Notes, and done your Pearson Mastering Biology assignments so when we form expert small group/large group then large group discussions jig-saw you will be able to contribute to your group as an expert. If you are slacking, your group will suffer.

Notes: Cornell Notes are a valuable proven to take notes and learn from your notes. Please see the following video on how to correctly take Cornell Notes:
https://www.teachertube.com/video/cornell-notes-for-students-avid-302936 &

Final Exam

Again, the final exam will be comprehensive (it will cover all the chapters). There will be a departmental final and a class final that all students need to take. You will take 2 finals, one by the department 10% and one by your instructor 15%. The average of both final exams will be included in your final grade. The Comprehensive Departmental Exit Exam, purpose is to assess your achievement in the course of instruction, and will be given at the scheduled Final Exam date and will account for the remaining 10% of your final grade along with the Class Final Exam which will account for 15% of your final grade. The final exams are multiple choice, essay or short answer, usually 50-80 questions each, and will be scored by **laptop (CAN NOT BE A CHROMEBOOK)** in Canvas for the class final and scantron for the departmental exit exam. You must bring your own **scantron** answer card and a No.2 lead pencil with clean eraser to the scheduled exam. HCC does not provide students with Scantron forms. They are sold in campus bookstores. Please note: All students are required to take the final exam. Failure to take the final exam will result in an "FX" grade.

Grading Formula

Grading Policy:

- Assessments: 40%
- Quizzes: 20%
- Mastering Biology/Lab Assignments: 15%
- Departmental Comprehensive Final: 10%
- Class Comprehensive Final: 15%

The HCC grading scale is:

A = 100 – 90:……4 points per semester hour

B = 89 – 80: ……3 points per semester hour
C = 79 – 70: ……2 points per semester hour
D = 69 – 60: ……1 point per semester hour
F = 59 and below……0 points per semester hour
IP (In Progress) ……0 points per semester hour
W(Withdrawn)……0 points per semester hour
I (Incomplete)……0 points per semester hour

IP (In Progress) is given only in certain developmental courses. The student must re-enroll to receive credit. COM (Completed) is given in non-credit and continuing education courses. To compute grade point average (GPA), divide the total grade points by the total number of semester hours attempted. The grades "IP," "COM" and "I" do not affect GPA

Incomplete Policy:

In this course, the purposes of the "I" (incomplete) grade is for students who are caught up and passing at the student withdrawal deadline, and then have a medical or other problem that prevents them from completing the course. If you are not passing at the student withdrawal deadline, you should drop yourself from the course, or you will likely earn an "F." An incomplete "I" grade will be given only if all of the following conditions are met:

- ✓ You have earned at least 85% of the available points by the date that the "I" grade is requested.
- ✓ You can provide documentation showing why you should earn an incomplete, such as a doctor's note, etc.
- ✓ You must be passing with a grade of "C" or better.
- ✓ You must request the incomplete in writing BEFORE **May 4, 2020**
- ✓ In all cases, the instructor reserves the right to decline a student's request to receive a grade of Incomplete.

HCC Grading Scale can be found on this site under Academic Information:
http://www.hccs.edu/resources-for/current-students/student-handbook/

Course Calendar

Week	Date	Lecture	Assignment due
1	1/22	Class Orientation	
2	1/27 1/29	Ch. 1 Evolution and the Foundation of Biology	Mastering Biology Ch. 1 due Feb. 2
3	2/3 2/5	Ch. 2 The Chemical Context	Mastering Biology Ch.2 due Feb. 9
4	2/10 2/12	Ch. 3 Carbon and the Molecular diversity of Life	Mastering Biology Ch. 3 due Feb. 16 Concept map for Macromolecules Feb. 12
5	**2/17** 2/19	**HOLIDAY: PRESIDENT'S DAY** Ch. 4 Tour of the Cell	Mastering Biology Ch. 4 due Feb. 23 Concept map for Cells Feb. 19
	2/21-23	**Lecture Exam #1 (Ch. 1, 2, 3, & 4)**	
6	2/24 2/26	Ch. 5 Membrane Transport & Cell Signaling	Mastering Biology Ch.5 due Mar. 1
7	3/2 3/4	Ch. 6 An Introduction to Metabolism	Mastering Biology Ch.6 due Mar. 8
8	3/9 3/11	Ch. 7 Cellular Respiration	Mastering Biology Ch.7 due Mar 13 Concept map for cellular respiration due Mar 11
9	3/16-22	**HOLIDAY: SPRING BREAK**	
10	3/23 3/25	Ch. 8 Photosynthesis	Mastering Biology Ch.8 due Mar 29
	3/27 - 29	**LECTURE EXAM #2 (Ch. 5, 6, 7, 8)**	
11	3/30 4/1	Ch. 9 The Cell Cycle	Mastering Biology Ch.9 due Apr 5 Concept map for cell division due Mar 30
12	4/6 4/8	Ch. 10 Meiosis and Sexual Life Cycles Ch. 11 Mendel and the Gene Idea **Last day to withdraw is Apr. 6th at 4:30PM**	Mastering Biology Ch.10 due Apr 12
13	4/13 4/15	Ch. 11 Mendel and the Gene Idea Ch. 12 The Chromosomal Basis of Inheritance	Mastering Biology Ch.11 & 12 due Apr 19
14	4/20 4/22	Ch. 13 The Molecular Basis of Inheritance	Mastering Biology Ch.13 due Nov 17
	4/24-26	**LECTURE EXAM #3 (Ch. 9-13)**	
15	4/27 4/29	Ch. 14 Gene Expression: From Gene to Protein Ch. 15 Regulation of Gene Expression	Mastering Biology Ch.14 & 15 due May 3 Concept map for gene expression due Apr. 27
16	5/4 5/6	Ch. 16 Development, Stem Cells and Cancer Ch. 17 Viruses Ch. 18 Genomes and their Evolution	Mastering Biology Ch.16-18 due May 8
	5/6-8	**LECTURE EXAM 4 (Ch. 14-18)**	
17	12/9	**Comprehensive CLASS** (Laptop) **AND DISTRICT Final Exam** (Scantron)	CRN 11066 3 pm sharp (No late entries)

Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

Instructor's Practices and Procedures

Missed Assignments

In general, there are no lecture make-up examinations. In some extreme instances (e.g., medically excused absence, death in immediate family with documented proof) a make-up lecture exam will be administered and may take either **oral or written essay format**. All make-up examinations will have a **maximum score of 90%** (reduced by 10%) regardless of whether there was a valid reason for missing the scheduled examination. Remember, typically, there will be no make-up lecture exams and final exams mandatory. Please note: All students are required to take the final exam. Failure to take the final exam will result in an "F" grade. Also, late assignments are not accepted; therefore, complete your daily assignments on time. If you are late with an assignment, still complete it as this information could affect your exam score.

Academic Integrity

This instructor is committed to a high standard of academic integrity in the academic community. In becoming a part of the academic community, students are responsible for honesty and independent effort. Failure to uphold these standards includes, but is not limited to, the following: plagiarizing written work or projects, cheating on exams or assignments, collusion on an exam or project, and misrepresentation of credentials or prerequisites when registering for a course. Cheating includes looking at or copying from another student's exam, orally communicating or receiving answers during an exam, having another person take an exam or complete a project or assignment, using unauthorized notes, texts, or other materials for an exam, and obtaining or distributing an unauthorized copy of an exam or any part of an exam. Plagiarism means passing off as his/her own the ideas or writings of another (that is, without giving proper credit by documenting sources). Plagiarism includes submitting a paper, report, or project that someone else has prepared, in whole or in part. Collusion is inappropriately collaborating on assignments designed to be completed independently. These definitions are not exhaustive. When there is clear evidence of cheating, plagiarism, collusion, or misrepresentation, disciplinary action may include but is not limited to requiring you to retake or resubmit an exam or assignment, assigning a grade of zero or "F" for an exam or assignment; or assigning a grade of "F" for the course. Additional sanctions including being withdrawn from the course, program or expelled from school may be imposed on a students who violate the standards of academic integrity. Students are expected to comply with stated policies in HCCS student handbook concerning academic honesty. **Cheating will not be tolerated. There will be no talking, looking on other people's papers or in any way try to cheat on any examination. This can lead to expulsion from Houston Community College. This is your official warning! Your first offense will be your last in my class.** See the link below for details.

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):
http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/

Attendance Procedures

Students should be on time for class and be prepared (having read and studied the assignments) with required materials including your textbook. Full class attendance is required including lecture portions. Full attention during lecture is required. You are expected to attend all lecture classes and labs regularly. You are also responsible for materials covered during your absences. Instructors may be willing to consult with you for make-up assignments, but it is your responsibility to contact the instructor. Class attendance is monitored daily. Although it is your responsibility to drop a course for nonattendance, the instructor has the authority to drop you for excessive absences. Please remember, that I typical don't drop students for nonattendance and please speak with me before considering dropping the course because you may be doing better than you think when I provide helpful suggestions. You may be dropped from a course after accumulating absences in excess of 12.5 percent of the total hours of instruction (lecture and lab). For example:

- For a 3 credit-hour lecture class meeting 3 hours per week (48 hours of instruction), you can be dropped after 6 hours of absence.
- For a 4 credit-hour lecture/lab course meeting 6 hours per week (96 hours of instruction), you can be dropped after 12 hours of absence.

Note: If you stop attending class for whatever reason, it is your responsibility to **officially drop the course by April 6, 2020. Otherwise you will receive an "F" or "FX" for the course.**

Habitual tardiness will not be tolerated. Students are expected to be in attendance for the entirety of the scheduled class and are responsible for completing assignments scheduled during their absence/s. It is the student's responsibility to amend their professional/personal schedule to meet the provided class schedule.

If circumstances significantly prevent you from attending classes, please inform me. It is the responsibility of each student to amend their professional/personal schedule to meet the class schedule. If you wish to drop the course, it is **your responsibility** to go online and do it. I usually will not drop students for non-attendance.

Departments and programs governed by accreditation or certification standards may have different attendance policies. Administrative drops are at the discretion of the instructor. Failure to withdraw officially can result in a grade of "F" or "FX" in the course.

For the latest updated information provided by HCC go to: https://www.hccs.edu/resources-for/current-students/student-handbook/

Student Conduct

Students are expected to conduct themselves appropriately while on College property or in an online environment. The instructor would institute established HCCS disciplinary action. Students who pose a threat to the safety of others will be subject to immediate withdrawal from the classroom. Please refer to the HCC Student Handbook.

Students should be on time for class and be prepared with required materials including textbook and lab manual. Full class attendance is required including lecture and lab portions. Full attention during lecture and lab is required. No use of any electronic devices during the class

period unless approved by your instructor. Students are expected to conduct themselves as adults. This includes courteous and respectful behavior towards the instructor and classmates. Disruptive behavior or any behavior that interferes with any educational activity being performed by the instructor will not be allowed. Additionally, no student may interfere with his/her fellow students" right to pursue their academic goals to the fullest in an atmosphere appropriate to a community of scholars. Disruptive behavior may result in removal from the class.

Instructor's Course-Specific Information

Your MasteringBiology and Canvas Grading will be posted immediately since they are computer-based. Please make sure that if you have any questions or problems at any time, that you first contact me as soon as possible. The worst thing you can do is wait to contact me or to not take advantage of the resources available to you. By taking an active part in your education, you will make your academic experience much more rewarding and exciting!!!

Early Intervention Program and Services:

Your success is our primary concern! If you are experiencing challenges achieving your academic goals, please contact your instructor or an early intervention coach. We can provide assistance with academic needs, ADA accommodations, classroom difficulties, financial concerns, and other issues.

Tutoring:

HCCS provides free online and on campus tutoring for all HCC students. Go to http://ctle3.hccs.edu/alltutoring/

Counseling Services:

Counseling services are available to students who are experiencing difficulty with academic issues, selection of college major, career planning, disability accommodations, or personal issues. http://learning.hccs.edu/programs/counseling

Electronic Devices

Absolutely no phone or other personal electronic devices are to be used during class (lecture and lab). This includes making or taking a call, reviewing messages, texting, playing games, checking email, surfing the web, anything that involves a phone or other personal electronic device like your smart watch, etc. If your work or family situation requires that you be available via phone, your phone can be on vibrate mode and you can take the call during our regular scheduled breaks or you can exit the class to review the call. Notify your friends, family, employers, and anyone else who regularly contacts you that you will be in class and that you should be contacted only when necessary. The taking of calls during class is not only disruptive but it is also discourteous to classmates and the instructor. If you would like to record my lecture, you must ask prior to recording each lecture!!!

IMPORTANT DATES: (Add important dates such as holidays, official date of record, last day for withdrawal, final exams, etc.)

- January 17, 2020 Last Day for 100% Refund
- January 21, 2020 Classes Begin
- February 3, 2020 Official Day of Record
- February 6, 2020 Last Day for 75% Refund
- February 12, 2020 Last Day for 25% Refund

- February 17, 2020 Holiday: President's Day
- March 16-22, 2020 Holiday: Spring Break
- April 6, 2020 Last Day to Withdraw
- April 10-12, 2020 Spring Holiday
- May 8, 2020 Last Day of Instruction
- May 11. 2020 Final Exams 3:00 p.m. sharp start time CRN 11066

DISCLAIMOR: It is your responsibility to read the syllabus in its entirety by the second-class period and contact the Instructor if you have any questions and/or need clarifications.

Biology Program Information

The Biology area of study here at HCC covers the smallest and simplest organisms (microbiology) to the largest and most complex organisms (human anatomy and physiology, zoology, botany).

AWARD TYPES: Associate in Science
AREA OF STUDY: Science, Technology, Engineering & Math

Please visit link: https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/biology/

HCC Policies

Here's the link to the HCC Student Handbook http://www.hccs.edu/resources-for/current-students/student-handbook/ In it you will find information about the following:

- Academic Information
- Academic Support
- Attendance, Repeating Courses, and Withdrawal
- Career Planning and Job Search
- Childcare
- disAbility Support Services
- Electronic Devices
- Equal Educational Opportunity
- Financial Aid TV (FATV)
- General Student Complaints
- Grade of FX
- Incomplete Grades
- International Student Services
- Health Awareness
- Libraries/Bookstore
- Police Services & Campus Safety
- Student Life at HCC
- Student Rights and Responsibilities
- Student Services
- Testing
- Transfer Planning
- Veteran Services

EGLS^3

The EGLS^3 (Evaluation for Greater Learning Student Survey System) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS^3 surveys are only available for the Fall and Spring semesters. –EGLS3 surveys are not offered during the Summer semester due to logistical constraints.
http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/

Campus Carry Link

Here's the link to the HCC information about Campus Carry:
http://www.hccs.edu/departments/police/campus-carry/

HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go to HCC Eagle ID and activate it now. You may also use Canvas Inbox to communicate.

Housing and Food Assistance for Students

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

Office of Institutional Equity

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (http://www.hccs.edu/departments/institutional-equity/)

disAbility Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including long and short term conditions, mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to http://www.hccs.edu/support-services/disability-services/

Title IX

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and

personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross
Director EEO/Compliance
Office of Institutional Equity & Diversity
3100 Main
(713) 718-8271
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu
http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/

Office of the Dean of Students

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/

Department Chair Contact Information

Dr. DaeJan Grigsby

Email: daejan.grigsby@hccs.edu

Phone: 713-718-7775

DISCLAIMOR: It is your responsibility to read the syllabus in its entirety by the second class period and contact the Instructor if you have any questions and/or need clarifications. The Instructor reserves the right to modify this syllabus when necessary with adequate notification to the students.