



**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 | #15321

Fall 2019 | 16 Weeks (8.26.2019-12.15.2019)

In-Person | West Loop C131 | TTh 9:30 a.m.-10:50 p.m.

3 Credit Hours | 48 hours per semester

Instructor Contact Information

Instructor: Partha Sen, Ph.D. Office Phone: 713-718-7775
Office: West Loop, Room 256; A3 Office Hours: By appointment
HCC Email: partha.sen@hccs.edu

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 email and I shall try to 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 various aspects of Biology, and I can hardly wait to pass that on. 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 in future.

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 by my HCC email. The best way to really discuss issues is in person and I'm available during office hours, by appointment, to tackle the questions. My goal is for you to walk out of the course with a better understanding of Biology. 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 \(https://eagleonline.hccs.edu\)](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.**

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.

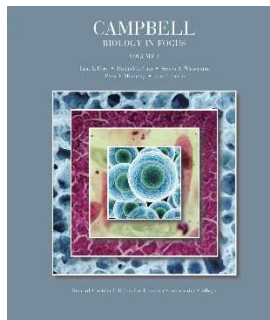
When applicable, look in Canvas for the scoring rubrics for assignments, samples of class assignments, and other information to assist you in the course.

<https://eagleonline.hccs.edu/login/ldap>

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](#)

Suggested Resources



HCCS Biology Lab Study Pages

[Click here to access Biology lab study pages online.](#)

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

In BIOL 1306, fundamental principles of living organisms will be studied, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of cytology, reproduction, genetics, and scientific reasoning are included.

Core Curriculum Objectives (CCOs)

BIOL 1306 satisfies the Natural Science requirement in the HCCS core curriculum. The HCCS Biology Discipline Committee has specified that the course address the following core objectives:

- **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.
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Program Student Learning Outcomes (PSLOs)

Can be found at:

<http://www.hccs.edu/programs/areas-of-study/social--behavioral-sciences/psychology/>

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

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.

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

Written Assignment

Assignment will be done in Mastering Biology through Pearson

Exams

There will be four exams and a comprehensive Departmental final. Each exam will be worth 100 points. There will be 50 questions. There will be a mixture of multiple choice, True/False and matching questions. There may be labeling questions as well. Each question is usually two points each. Each exam is worth 18.75% of the total grade. No lowest grade will be dropped. HCC does not provide students with Scantron forms. They are sold in campus bookstores.

Final Exam

The Comprehensive Departmental Final is 10% of the total grade. There will be fifty (50) questions in the exam and no bonus questions.

Grading Formula

Exams	75%
Departmental Final	10%
Homework	10%
Participation	5%

Grade	Total Percentages
A	90
B	80-89.9
C	70-79.9
D	60-69.9
F	<60
Grade	Total Points

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 November 8, 2019**
- ✓ 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

Date	Chapters	Topics to be covered
08/27	1	Organization session; Introduction
08/29	2	The chemical context of life
09/03	2	The chemical context of life
09/05	2	The chemical context of life
09/10	3	Carbon and Molecular Diversity
09/12	4	A tour of the cell
09/17		1st Lecture Exam
09/19	5	Membrane transport and cell signaling
09/24	6	Introduction to Metabolism
09/26	7	Cellular Respiration and fermentation
10/01	7, 8	Cellular Respiration, Photosynthesis
10/03	8	Photosynthesis
10/08	9	The Cell Cycle
10/10		2nd Lecture Exam
10/15	9	The cell cycle
10/17	10	Meiosis and Sexual Life Cycles
10/22	11	Mendel and Gene Idea
10/24	12	The Chromosomal Basis of Inheritance
10/29	12	The Chromosomal Basis of Inheritance
10/31	13	The Molecular Basis of Inheritance
11/05	13	The Molecular Basis of Inheritance
11/07	14	From Gene to Protein
11/12	15	Regulation of gene expression
11/14		3rd Lecture Exam
11/19	15	Regulation of gene expression
11/21	16	Development of stem cells, and cancer
11/26	16	Development of stem cells, and cancer
11/28		Thanksgiving Holiday
12/03	17	Viruses
12/05		4th Lecture examination
12/10		Departmental Final (Comprehensive)

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

Points will be deducted if assignments are not submitted on time. Students have to be careful about the submission dates of homework on Mastering Biology. No extensions will be done. There will be no make-up exam unless there is an emergency that has been documented. There is no make-up for the Departmental Final. Insert your make-up policy for course work other than the departmental final exam. Make-up exams are not retakes.

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.

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

Please go over the attendance policy of HCCS. *"Students are expected to attend classes regularly. Students are responsible for materials covered during their absences. Class attendance is checked daily by instructors. Although it is the responsibility of the student to drop a course for non-attendance, the instructor has full authority to drop a student for excessive absences. A student may be dropped from a course for excessive absences after the student has accumulated absences in excess of 12.5% of the hours of instruction (including lecture and laboratory time)."*

I realize that sometimes outside circumstances can interfere with school, and I will try to be as accommodating as possible, but please be aware of the attendance policy. Attendance will be taken at the end of each class.

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.

Instructor's Course-Specific Information (As Needed)

1. Text book and Laboratory manual are required.
2. Class attendance is required. Four absences will result in administrative withdrawal.
3. No eating, drinking and smoking in the lab.
4. You must read the lab safety rules before doing any of the lab exercises and follow them.

5. Lab reports: Although students will work in groups, individual active participation is Expected. You are required to complete the lab reports.
6. No make up exams will be given. Should a student arrive after the first examinee has turned in the test materials, she/he will be considered as not having taken the examination.
7. No extra credit
8. Communication from the Instructor will be done using students' HCCS email id.

Electronic Devices

9. **Cellular telephones to remain off while in the class. No text messaging. Phones should not be on the desk.**
10. **Purses, bags, caps etc. should not be on the desk. No hoodies on exam days.**
11. **No Web browsing. Points from your test grade will be deducted if you don't obey the rules.**

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

EGLS³

The EGLS³ ([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. EGLS³ 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

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