



**HOUSTON COMMUNITY COLLEGE (SW West Loop)**  
**GENERAL BIOLOGY I FOR SCIENCE MAJORS BIOL 1406/CRN # 37233**  
**Instruction Mode: (In Person)**

**INSTRUCTOR CONTACT INFORMATION**

**Instructor: Partha Sen PhD**  
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**Office Phone: 713 718 7771**  
**Office Hours: By appointment**

**WELCOME TO**

**Course Title: GENERAL  
BIOLOGY I**

**Course Prefix: BIOL 1406**

**Course Number: 37233**

**Credit Hours: 4**

**Semester and Year: Fall 2017**

**Class Days & Times: Mon/Wed 11:00AM-1:50PM**

**Lecture: Day, Room # : Wednesdays, #C222**

**Lab: Day, Time, Room # : Monday, 162**

**COURSE OVERVIEW**

**Program Student Learning Outcomes (PSLOs) for the Biology Discipline**

- 1.** Will display an understanding of biological systems and evolutionary processes spanning all ranges of biological complexity, including atoms, molecules, genes, cells, and organisms.
- 2.** Will integrate factual and conceptual information into an understanding of scientific data by written, oral and/or visual communication. (This may include successful completion of a course-specific research project or a case study module).
- 3.** Will demonstrate proficiency and safe practices in the use of laboratory equipment and basic laboratory techniques.
- 4.** Will apply principles of the scientific method to problems in biology in the collection, recording, quantitative measurement, analysis and reporting of scientific data.

**Course Description and Student Learning Outcomes (CSLOs)**

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.

Completion of the specific Student Learning Outcomes listed below does NOT and will NOT guarantee the student any specific final course grade at the end of the semester!

- 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.
  11. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
  12. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
  13. Communicate effectively the results of scientific investigations

**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:**

### **GETTING READY**

#### **Prerequisites:**

Math 0106 or higher placement by testing, must be placed in college level reading.

**Co-requisites:**None

#### **Required Material:**

##### **Textbook: Valuepack**

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

**PLEASE NOTE:** It's very important students either purchase their book/access code bundle from the HCC Bookstore OR purchase directly online via the registration process as detailed in the video below. HCC has custom courses set up with a negotiated price for HCC students – if an access code is purchased at any other retailer, it will not work.

To help students register for this course, here is a quick registration video that can help students: <http://screencast.com/t/XhhEKf12B2o>

And here is a link to student registration handout and power point presentation:

<http://www.pearsonmylabandmastering.com/northamerica/educators/mm-support/get-started/index.html>

#### **Required Laboratory Manual:**

Biology 1406 Laboratory Manual Blue Door Publishing 2012, 2nd edition 9781599843148  
Tom Loesch *et al*

**Learning Web:** Syllabus and other relevant course information may be posted on the Learning web found at the following link:  
<http://learning.hccs.edu/faculty/>

**CANVAS:** Assignments may be posted online on CANVAS found at the following link:

**Other Materials and resources:**

**Biology Lab Review Pages:** <http://ctle.hccs.edu/biologylabs/index.html> You will get access to digital images, animations, and labeling exercises to review models, slides, and experiments that we cover in lab.

**STEM Website for students:** [www.hccs.edu/district/students/stem](http://www.hccs.edu/district/students/stem) Great information on science clubs, seminars, symposium, research opportunities that are available to HCC students. Check back often- updated regularly.

**Tutoring:** <https://hccs.upswing.io/> Get expert one-on-one help, Online or In Campus, specifically for HCC students.

**TENTATIVE INSTRUCTIONAL OUTLINE:** The Instructor reserves the right to change the instructional outline if needed. Students will be informed in a timely manner of any changes.

<b>Date</b>	<b>Chapters</b>	<b>Topics to be covered</b>
08/28		No instructions due to inclement weather
8/30		No instruction due to inclement weather
9/06		No instructions due to inclement weather
09/11	1, 2	Organization session; Introduction, The chemical context of life
09/13	3, 4	Carbon and Molecular Diversity, A tour of the cell
09/18	Lab 1, 2	Laboratory safety, Basic Chemistry, Properties of Water
09/20	5	Membrane transport and cell signaling
09/25	Lab 3, 4	Biochemistry: Detection of Biological Molecules, The care and use of the microscope
09/27	6	Introduction to Metabolism
10/02	Lab 5	Cell structure, Diffusion and Osmosis
10/04		<b>1<sup>st</sup> Lecture Exam</b>
10/09	Lab 6, 7	Diffusion and Osmosis, Enzymes
10/11	7	Cellular Respiration and fermentation
10/16	Lab 8, 9	Respiration and Fermentation, Photosynthesis
10/18	8	Photosynthesis
10/23		<b>2<sup>nd</sup> Lecture Exam</b>
10/25	9, 10	The cell cycle, Meiosis and Sexual Life Cycles
10/30	Lab 10	Cell Division
11/01		<b>1<sup>st</sup> Lab Exam</b>
11/06	11	Mendel and Gene Idea
11/08	12	The Chromosomal Basis of Inheritance
11/13	Lab 11	Genetics
11/15	13, 14	The Molecular Basis of Inheritance, From Gene to Protein
11/20	Lab 12	DNA to Protein

11/22	15	Regulation of gene expression The Organization & Control of Eukaryotic Genomes
11/27	16, 17	Development of stem cells, and cancer, Viruses
11/29		<b>3<sup>rd</sup> Lecture Exam</b>
12/04	Lab 13	Biotechnology and DNA extraction
12/06		<b>2<sup>nd</sup> Lab Exam &amp; 4<sup>th</sup> Lecture examination</b>
12/11		<b>Departmental Final (Comprehensive)</b>

### **INSTRUCTOR GUIDELINES AND POLICIES**

1. Text book and Laboratory manual are required.
2. Class attendance is required. Four absences will result in administrative withdrawal.
3. You must read the lab safety rules before doing any of the lab exercises and follow them.
4. Lab reports: Although students will work in groups, individual active participation is expected. You are required to complete the lab reports.
5. 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.
6. No extra credit
7. No food or drink in the labs
8. **Cellular telephones to remain off while in the class. No text messaging. Phones should not be on the desk. Bags, purses etc. should be placed under the table.**
9. **No hoodies on the date of exams**
10. **No Web browsing. Points from your test grade will be deducted if you don't obey the rules.**

**Attendance:** Attendance is mandated by the state. You are expected to attend the entirety of the scheduled lecture and lab classes. 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. 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. 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.

**QUESTIONS/PROBLEMS:** 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!!

### **EGLS<sub>3</sub> (Evaluation for Greater Learning Student Survey System)**

At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time near the end of the term, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and department chairs for continual improvement of instruction. Go to [www.hccs.edu/egls3](http://www.hccs.edu/egls3) for more information. Please refer to **Student Handbook** for complete instructions and rules.

### **GRADE DETERMINATION:**

Lecture Exams-60% (Lowest grade dropped), 2 Lab practical Exams-20%, Homework-5%  
Departmental Final-10%, participation-5%.

### **LETTER GRADE ASSIGNMENT:**

#### **Grading Scale**

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 points per semester hour  
F = 59 and below;.....0 points per semester hour  
FX (Failure due to non-attendance)  
IP (In Progress)-  
W (Withdrawn)  
I (Incomplete)

### **REPEATING COURSES (THREE-PEAT RULE)**

As a result of recent Texas legislative changes, please be advised that HCC is charging additional tuition for students who enroll in the same class three or more times at HCC. While it is the hope of HCC that students will be successful in their first attempt at classes, we realize that life demands, academic struggles, and other issues may result in students needing to take the same class more than once. Speaking with an advisor will help you develop student success skills, improving your overall academic performance. If a student repeats a course in which a grade (A-F) has been received, the highest grade received at HCC is the permanent grade for the course and will be used in computing the GPA. All grades earned in a given course will be reflected on the transcript. Other colleges may compute the GPA differently than HCC.

### **COURSE WITHDRAWALS (6-Drop Rule)**

Students must withdraw by the withdrawal deadline in order to receive a “W” on a transcript. Final withdrawal deadlines vary each semester and/or depending on class length, please visit the online Academic Calendar, any HCC Registration Office, or any HCC advisor to determine class withdrawal deadlines.

Be certain you understand HCC policies about dropping a course and consult with a counselor/advisor to determine if withdrawing is in your best interest. It is your responsibility to withdraw officially from a class and prevent an “F” from appearing on your transcript. Senate Bill 1231 limits the number of W’s a student can have to 6 classes over the course of their entire academic career. This policy is effective for students entering higher education for the first time in fall 2007 and subsequent terms. Withdrawals accumulated at any other Texas public higher

education institution count toward the 6 course total. Withdrawals for certain circumstances beyond the students control may not be counted toward the 6-drop limit. In addition, withdrawing from a course may impact your financial aid award or eligibility. Contact the Financial Aid Office or website to learn more about the impact of withdrawing on financial aid.

## **HCCS IS COMMITTED TO YOUR SUCCESS**

### **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 <https://hccs.upswing.io/>

### **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>

## **ADDITIONAL INSTRUCTOR AND INSTITUTIONAL POLICIES**

### **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.

### **STUDENT BEHAVIOR EXPECTATIONS**

*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.*

### **AMERICANS WITH DISABILITIES ACT STATEMENT**

HCCS is dedicated to providing the least restrictive environment for all students. We promote equity in academic access through the implementation of reasonable accommodations as required by the Vocational Rehabilitation Act of 1973, Title V, Section 504 and the Americans with Disabilities Act of 1990 (ADA) which will enable students with disabilities to participate in and benefit from all post-secondary educational activities.

If you require reasonable accommodations because of a physical, mental, or learning disability, please contact the Counseling Office to obtain the necessary information to request accommodations <http://www.hccs.edu/district/students/disability-services/ada-counselors/>. Upon completion of this process, please notify your instructor as soon as possible and preferably before the end of the first two weeks of class to arrange for reasonable accommodations.

### **COMPUTER VIRUS PROTECTION**

Computer viruses are, unfortunately, a fact of life. Using removable devices on more than one computer creates the possibility of infecting computers and diskettes with a computer virus. This exposes the computers of the college, your personal computer, and any others you may be using to potentially damaging viruses. The college has aggressive anti-virus procedures in place to protect its computers, but cannot guarantee that a virus might not temporarily infect one of its machines. It is your responsibility to protect all computers under your control and use and ensure that each diskette you use, whenever or wherever you use it, has been scanned with anti-virus software. Since new viruses arise continually, your anti-virus software must be kept current. And, since no anti-virus software will find every virus, keeping backup copies is extremely important.

### **EQUAL OPPORTUNITY STATEMENT**

It is the policy of the HCCS to provide equal employment, admission and educational opportunities without regard to race, color, creed, national origin, gender, age, veteran's status, sexual orientation, or disability.

### **FERPA**

The academic, financial and non-directory information on your student account is confidential and protected by the Family Educational Rights & Privacy Act (FERPA). We cannot release certain information to another person without your written authorization. Further information regarding Student Records and FERPA can be found at; <http://www.hccs.edu/district/about-us/procedures/student-rights-policies--procedures/>

### **TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, 20 U.S.C. A§ 1681 ET. SEQ.**

Title IX of the Education Amendments of 1972 requires that institutions have policies and procedures that protect students' rights with regard to sex/gender discrimination. Information regarding these rights are on the HCC website under Students-Anti-discrimination. Students who are pregnant and require accommodations should contact any of the ADA Counselors for assistance. It is important that every student understands and conforms to respectful behavior



while at HCC. Sexual misconduct is not condoned and will be addressed promptly. Know your rights and how to avoid these difficult situations. Log in to: [www.edurisksolutions.org](http://www.edurisksolutions.org) . Sign in using your HCC student e-mail account, then go to the button at the top right that says **Login** and enter your student number.

### **HCC Policy Statement: Sexual Misconduct**

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. 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, Houston, TX 77266-7517 or [Institutional.Equity@hccs.edu](mailto:Institutional.Equity@hccs.edu)

At HCC the safety of our students, staff, and faculty is our first priority. As of August 1, 2017, Houston Community College is subject to the Campus Carry Law (SB11 2015). For more information, visit the HCC Campus Carry web page at <http://www.hccs.edu/district/departments/police/campus-carry/>.

### **FINAL EXAMINATIONS**

A final evaluation activity will occur during the published final evaluation period. The appropriate dean, director, or department chair must approve any variation to this schedule.

### **IMPORTANT DATES:**

**OFFICIAL DATE OF RECORD: SEPTEMBER 26, 2017**

**LAST DATE FOR ADMINISTRATIVE/STUDENT WITHDRAWAL IS APRIL 03, 2017**

**DISCLAIMER:** 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.