



**HOUSTON COMMUNITY COLLEGE (Central Campus)**

**GENERAL BIOLOGY FOR SCIENCE MAJORS I (LAB) BIOL 1106/CRN # 18902**

**Instruction Mode: (In Person) INSTRUCTOR**

**CONTACT INFORMATION**

**Instructor: Dr. Parker**

**Office Phone: N/A**

**Office: LHSB 401**

**Office Hours: By apt.**

**E-mail: donald.parker@hccs.edu**

**WELCOME TO**

**Course Title: BIOLOGY FOR SCIENCE  
MAJORS I**

**Semester and Year: Fall  
2018**

**Course Prefix: BIOL 1106**

**Course Number: 18902**

**Class Days & Times:  
Tuesday 5:30 – 8:20 pm**

**Credit Hours: 1**

**Lab: Day, Time, Room # :  
Tuesday, 5:30 – 8:20 p.m.,  
Room 304**

**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)**

This laboratory-based course accompanies **BIOL 1306 Biology for Science Majors I**. Laboratory activities will reinforce the fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Study and examination of the concepts of cytology, reproduction, genetics, and

scientific reasoning are included.

Upon successful completion of this course, students will:

1. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory. Communicate effectively the results of scientific investigations.
3. Explain the methods of inquiry used by scientist.
4. Identify the basic properties of substances needed for life.
5. Compare and contrast the structures, reproduction, and characteristics of prokaryotic cells, and eukaryotic cells.
6. Describe the structure of cell membranes and the movement of molecules across a membrane. 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.

**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**

##### **Prerequisite:**

BIOL 1306 Biology for Science Majors I (lecture)

##### **Co-requisite:**

BIOL 1306 Biology for Science Majors I (lecture)

##### **Material:**

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

1. General Biology I Lab Manual - A Hands-on Experience, 4th edition, Ed. by Jyoti Wagle & Marsha Turell, 2018, Hayden-McNeil, ISBN: 978-1-5339-0841-4

**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 Eagle online CANVAS found at the following link: [eagleonline.hccs.edu](http://eagleonline.hccs.edu) Your Username is same as your student ID number used for registration (For example: W0034567). Your default password is "distance". Once you log-in, you can change the password.

##### **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/stem](http://www.hccs.edu/stem) Great information on science clubs, seminars, symposium, and 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.

**Biol 1106 Lab Manual Used at Central and SE Campuses**

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**General Biology I Lab Manual: A Hands-on Experience, 4  
ISBN: 9781533908414**

**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.

Week	Lab Assignment and Exams
1	Organization session; Review Lab Review website: <a href="http://ctle.hccs.edu/biologylabs/index.html">http://ctle.hccs.edu/biologylabs/index.html</a> Lab Ex 1: Lab Safety, Procedure
2	Lab Ex 3: Measurements Lab Ex 4: Basic Chemistry
3	Lab Ex 5: Water and its Properties
4	Lab Ex 6: Biomolecules, Lab Ex7: The Microscopes
5	<b><u>Lab Exam 1 (Includes Ex 1-7)</u></b>
6	Lab Ex 8: Cell Structure and Function
7	Lab Ex 9: Diffusion and Osmosis
8	Lab Ex 10: Enzymes-Catalysts of Life
9	Lab Ex 11: Cellular Respiration & Fermentation
10	Lab Ex 12: Photosynthesis
11	<b><u>Lab Exam 2: (Includes Ex 8-12)</u></b> Lab Ex 13: Cell Division: Mitosis
12	Lab Ex 14: Cell Division Meiosis Lab Ex 15: Mendelian Genetics
13	Lab Ex 16: Non-Mendelian Genetics & Human Heredity Lab Ex 17: DNA Extraction, Structure & Replication
14	Lab Ex 18: Protein Synthesis Lab Ex 19: Gel Electrophoresis
15	<b><u>Lab Exam 3 (Includes Ex 13-19)</u></b>
16	<b><u>Presentations/Group project submissions/Extra Credit/ Lab Reports turn-in/ OR Practical: Pipetting technique and use of the Microscope.</u></b>

## **INSTRUCTOR GUIDELINES AND POLICIES**

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**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.

**Note that 12.5% is approximately 4 labs for this 1-semester hour course.** 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.

**Assignments:** You are **required** to have read the assigned lab for the day and completed the Pre-Lab prior to the start of the lab. The Pre-Lab will be checked and graded, prior to the lab!!!

**Exams/Quizzes:** There will be 3 lab exams. They will cover material we cover in the labs and the material in the lab book. They may consist of fill in the blanks, multiple choice, and short answer. You will get a maximum of one hour or one and half-hour period to complete your lab exam depending on the number of questions. **No cell phones are allowed in use at any time in the classroom unless permitted by the instructor as it may disturbs the class. Audible cell phone ringing may result in your removal from class that day. Cell phone use during examination will be considered cheating and will result in course failure. Entering and exiting lecture room is not permitted once exams have begun; therefor, go to the restroom prior to the exam and all personal items must be placed at the front of the room.**

**Make-up Exams/Quizzes:** There will be no make-up exams without documentation and laboratory exams are mandatory. In general, there are no lab make-up examinations. In some extreme instances (e.g., medically excused absence, death in immediate family with documented proof) a make-up lab 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 exams and that laboratory exams are mandatory.

**Extra Credit:** There are no special assignments for extra grade points.

**Laboratory Policy:** Lab safety will be reviewed on the first day of lab. Experiments will be performed in groups. Each student should arrive at the lab on time, with his or her lab manual. Each student is responsible for completing the lab reports at the end of each lab.

**IN CLASS TECHNOLOGY (Cell Phones, Laptops, etc.)** 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!!!

**INSTRUCTORS'S ASSURANCE:** 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 will 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.

**BEHAVIOR AND ETIQUETTE:** Students should be on time for class and be prepared with required materials including textbook and lab manual. All your personal belongings except your pencil, lab manual and textbook should be placed in the back of the room on the bench so your personal effects won't get contaminated. Remember, you never know what the prior classes' lab entailed and if they disinfected the lab bench properly. 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.

**NO EATING OR DRINKING OR SMOKING IN LABORATORY:** No food or drinks are allowed in the laboratory. In addition, no smoking is allowed.

**DRESS CODE:**

**While in the laboratory you should have the following:**

- Approved safety goggles

- A shirt that covers the stomach and lower back as well as the upper arms
- Long pants (An acceptable, but not recommended, alternative is to wear shorts, a skirt, or a lab coat such that your knees are covered when you are sitting down.)
- Shoes that completely cover the foot.

**Avoid wearing the following items to lab:**

- Contact lenses
- Tank tops or cropped shirts
- Mesh shirts
- Shorts or skirts that do not cover your knees when you are sitting
- Sandals, flip-flops, or other shoes that do not completely cover your feet. Sandals with socks is not considered appropriate attire.

**Student Services Policies:** Access up-to-date Student Services Policies on their Web site:

<http://www.hccs.edu/resources-for/current-students/student-handbook/>

**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.

**The HCC grading scale is:**

E = 100 – 90: .....	4 points per semester hour
F = 89 – 80: .....	3 points per semester hour
G = 79 – 70: .....	2 points per semester hour
H = 69 – 60: .....	1 point per semester hour
59 and below = F.....	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
AUD (Audit) .....	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.

## **GRADE DETERMINATION:**

All the exams will be considered towards final grade.

Lab Exams	70%
Lab Reports/Book	20%
Quizzes	5%
Pre-Lab Reports/Participation	<u>5%</u>
	100%

## **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 6drop 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>

### **Accommodations due to a qualified disability**

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including 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/>

### **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 postsecondary 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/support-services/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.

### **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.

### **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/aboutus/procedures/student-rights-policies--procedures/>

### **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. 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:

Director EEO/Compliance  
Office of Institutional Equity & Diversity  
3100 Main  
(713) 718-8271  
Houston, TX 77266-7517 or [Institutional.Equity@hccs.edu](mailto:Institutional.Equity@hccs.edu)

### **HCC Online and/or Continuing Education Policies**

All students are responsible for reading and understanding the HCC Online Student Handbook, which contains policies, information about conduct, and other important information. For the HCC Online Student Handbook click on the link below or go to the HCC Online page on the HCC website. The HCC Online Student Handbook contains policies and procedures unique to the online student. Students should have reviewed the handbook as part of the mandatory orientation. It is the student's responsibility to be familiar with the handbook's contents. The handbook contains valuable information, answers, and resources, such as HCC Online contacts, policies and procedures (how to drop, attendance requirements, etc.), student services (ADA, financial aid, degree planning, etc.), course information, testing procedures, technical support, and academic calendars. Refer to the HCC Online Student Handbook by visiting this link: <http://www.hccs.edu/online/class-orientation--handbook/>

Access CE Policies on their Web site:  
<http://www.hccs.edu/continuing-education/>

### **HCC Campus Carry**

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/departments/police/campus-carry/>

### **We Care**

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Dean of Students for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable him/her to provide any resources that she may possess.

### **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**

- |                   |                        |                            |
|-------------------|------------------------|----------------------------|
| • August 28, 2018 | Classes Begin          |                            |
| • Sept. 3, 2018   | Labor Day              |                            |
| • Sept. 10, 2018  | Official Day of Record |                            |
| • Nov 02, 2018    | Last Day to Withdraw   |                            |
| • Dec. 11, 2018   | Final Exams            | 5:30 p.m. sharp start time |

**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.