

 **HOUSTON COMMUNITY COLLEGE (Central)**

**Natural Sciences and Horticulture Division: BIOLOGY DEPARTMENT**

# GENERAL BIOLOGY I FOR SCIENCE MAJORS BIOL 1306/CRN #s 19295 & 19297

**Instruction Mode: (In Person)**

**INSTRUCTOR CONTACT INFORMATION**

|  |  |  |  |
| --- | --- | --- | --- |
| **Instructor: Brian Mahon, PhD** |  | **Office Phone: 713-718-6423** |  |
| **Office:**  **LHSB 313** |  | **Office Hours: M/W 11 - 12:30**  |  |
| **E-mail:** brian.mahon@hccs.edu |  |  |  |

**WELCOME TO**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Title: GENERAL BIOLOGY I** |  | **Semester and Year: Fall 2018** |  |  |
| **Course Prefix: BIOL**  |  | **Class Days & Times: Tuesday & Thursday** |  |  |
| **Course Number: 1306** |  | **(19295) Lecture: Mon. & Wed. 2– 3:20 pm, Room # : 305** |  |  |
| **Credit Hours: 3** |  | **(19297) Lecture: Mon. & Wed. 5:30– 6:50 pm, Room # : 314** |  |  |

**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 MasteringBiology  Package for Houston Community College" **ISBN**: 1323751432 // 9781323751435

**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/brian.mahon>

**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.an

**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:*** <http://www.hccs.edu/resources-for/current-students/stem--science-technology-engineering--mathematics/>

 Great information on science clubs, seminars, symposium, research opportunities that are available to HCC students. Check back often- updated regularly.

***Tutoring:*** <http://ctle3.hccs.edu/alltutoring/>

 Get expert one-on-one help, Online or In Campus, specifically for HCC students.

**INSTRUCTOR GUIDELINES AND POLICIES**

**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.
* **Attendance** is mandated by the state. Students are expected to be in attendance for the entirety of the scheduled class, including lab and lecture portions. Attendance will be recorded **at any time during the class session** and will be given only if you attend full class period. Tardiness will not be accepted. Coming late to the class or leaving early for whatever reason, is considered a disruption and no attendance will be given for that day. You are responsible for everything covered or announced during your absence. More than four unexcused absences may result in an administrative and/or instructor withdrawal without notice. If you stop attending the course or do not participate in the assessment, **you** are responsible for withdrawing from the course before the withdrawal deadline. Failing to do so will result in an FX grade at the end of the semester.
* **Textbook and Pearson Mastering are required.**
* If you are late for a lecture or a lab exam, you will be allowed to take the exam if 1) you arrive less than 15 minutes after the class has started and 2) as long as no one else has completed the exam and left the room. Also, you will get only the remaining time to take your exam. No bathroom breaks during exams.
* If you miss one exam, that exam will automatically become your drop exam. If, for whatever reason, you miss a second exam, it will be counted as a zero score.
* **NO MAKE-UP EXAMS** will be given unless exceptional circumstances. There must be a valid documented reason for a make-up exam and it must be pre-approved by the instructor. Acceptable reasons include hospitalization, doctor's certification that the student was unfit to write the exam, or subpoenas for court appearances. Make-up requests must be submitted in writing, with the appropriate official documentation. Makeup exams must be taken by the time designated by the instructor. The format of the make-up exam may vary from the scheduled examination. Lab exams are not eligible for makeup exams.
* **Classroom Behavior** As your instructor and as a student in this class, it is our shared responsibility to develop and maintain a positive learning environment for everyone. All students in HCC are required to follow all HCC Policies & Procedures, the Student Code of Conduct, the Student Handbook, and relevant sections of the Texas Education Code, both in the classroom and online in our Canvas supplemental course. Students who violate these policies and guidelines will be subject to disciplinary action that could include denial of access to course-related email, discussion groups, or being removed from the class.
* **Cellphone, Laptop, Camera, Recording and/or other Electronic Devices** are prohibited in classrooms, laboratories, faculty offices, and other locations where instruction, tutoring, or testing occurs. If electronic devices are used during a test, a grade of F will automatically be assigned. Students with disabilities who need to use a recording device as a reasonable accommodation should contact the Office for Students with Disabilities for information regarding reasonable accommodations.
* **No children** are allowed in the classroom or laboratory. No smoking (including electronic cigarettes), eating or drinking allowed in the classroom or laboratory.
* You must **read the laboratory safety rules** before doing any of the lab exercises.
* The laboratory safety release form must be signed during the first lab session.
* **Grade status**: You may contact me to find out about your status at any time during the semester. Grades will also be posted on Eagle online. At the end of the semester, your overall grade will be available through HCC
* **CHEATING IS NOT PERMITTED**!!! Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Penalties and/or disciplinary proceedings may be initiated by College System officials against a student accused of scholastic dishonesty. Students who cheat will receive a grade of 0% in that exam and may be subject to other disciplinary actions, including receiving a failing grade for the course. All electronic SMART phone, watch or other electronic devises must be placed at the top of the classroom during any exams and testing. Students found with a devise on or near their presence during an exam (even if not looking it actively at that time) will be considered as having cheated in that exam. The same policy goes for students who attempt to see another student’s scantron or testing material. Further, any student enabling another student to cheat will be subject to the same disciplinary action.
* **Course material** handed out in class or posted online is for your personal use only and it is not permissible to share or distribute any of this material without my prior consent.

Please refer to **Student Handbook** for complete instructions and rules [http://www.hccs.edu/resources-](http://www.hccs.edu/resources-for/current-students/student-handbook/)  [for/current-students/student-handbook/](http://www.hccs.edu/resources-for/current-students/student-handbook/)

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

**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!!

**EGLS3 (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.  For more information, go to <http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/> .

**GRADE DETERMINATION:**

4 LECTURE EXAMS 250 PTS EACH \_\_\_\_\_\_\_\_\_\_\_\_\_

***LOWEST TEST DROPPED (750 PTS)***

1 FINAL EXAM 10% 100 PTS \_\_\_\_\_\_\_\_\_\_\_\_\_

Mastering Home Work 100 PTS \_\_\_\_\_\_\_\_\_\_\_\_\_

OTHER ASSIGNMENTS 50 PTS \_\_\_\_\_\_\_\_\_\_\_\_\_

**Total 1000 PTS \_\_\_\_\_\_\_\_\_\_\_\_\_**

**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

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

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

.**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 WITHDRAWLS (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 <http://ctle3.hccs.edu/alltutoring/> **or Central Campus (San Jancinto Building Room: SJAC 384)**

**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>

**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/support-services/disability-services/>

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.

**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. Go to <http://www.hccs.edu/applying-and-paying/financial-aid/food-scholarship/> for more information.

**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/about-us/procedures/student-rights-policies--procedures/

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

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 Houston, TX 77266-7517 or Institutional.Equity@hccs.edu

**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/>

**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.

**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/media/houston-community-college/distance-education/student-services/HCC-Online-Student-Handbook.pdf>

Access CE Policies on their Web site:

<http://www.hccs.edu/online/student-services/course-orientations/>

**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.

### TENTATIVE INSTRUCTIONAL OUTLINE

|  |  |
| --- | --- |
| **Week** | **LECTURE** |
| 1. Aug 27 | **Chapter 1 Introduction to Biology** |
| 2. Sep 3 | **Labor Day Holiday - Monday (no classes)****Chapter 2** The Chemical Context of Life**Chapter 3** Carbon and the Molecular diversity of Life |
| 3. Sep10 | **Chapter 3** Carbon and the Molecular diversity of Life**Chapter 4 A Tour of the Cell** |
| 4. Sep 17 | **Chapter 4 A Tour of the Cell****Chapter 5** Membrane Transport and Cell Signaling**Mastering Homework (Chaps 1-4) due Sun, Sep 23** |
| 5. Sep24 | **LECTURE EXAM #1 (Chaps 1-4)****Chapter 5** Membrane Transport and Cell Signaling *cont.* |
| 6. Oct 1 | **Chapter 6** An Introduction to Metabolism |
| 7. Oct 8 | **Chapter 7** Cellular Respiration |
| 8. Oct 15 | **Chapter 8** Photosynthesis**Mastering Homework (Chaps 5-8) due Sun Oct 21** |
|  |  |
| 10. Oct 22 | **LECTURE EXAM #2 (Chaps 5-8)****Chapter 9** The Cell Cycle |
| 11. Oct 29 | **Chapter 10** Meiosis and Sexual Life Cycles**Chapter 11** Mendel and the Gene Idea |
| 12. Nov 5 | **Chapter 11** Mendel and the Gene Idea-*cont***Chapter 12:** The Chromosomal Basis of Inheritance**Mastering Homework (Chaps 9-12) due Sun Nov 11** |
| 13. Nov 12 | **LECTURE EXAM #3 (Chaps 9-12)****Chapter 13** The Molecular Basis of Inheritance |
| 14. Nov 19 | **Chapter 14** Gene Expression: From Gene to Protein**Chapter 15** Regulation of gene Expression |
| 15. Nov 26 | **Chapter 16** Development, Stem Cells and Cancer**Chapter 17** Viruses**Mastering Homework (Chaps 13-17) due Tuesday Dec 4** |
| 16. Dec 3 | **Finish any other lectures Dec 3****LECTURE EXAM #4 (Chaps 13-17) Dec 5** |
| 17. Dec 10 & 12 |  **Departmental Final Comprehensive Exam (Mandatory)**(19297) Monday Dec 10 & (19295) Wednesday Dec 12 |