

BIOL 1407: General Biology II
CRN 86564— Spring 2016
4 credit hour lecture/lab course
96 hours per semester/ 16 weeks
Instructor/Contact Information: Dr. Brian C. Mahon
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Phone: 713-718-6423

Office location and hours: LHSB 314, Monday/Wednesday 12:30-2 pm
Please feel free to ask me questions immediately after class. If you are not free during this time please arrange an alternate time.

COURSE DESCRIPTION: General Biology II (1407) is a study of the broad diversity of organisms in the five kingdoms, evolution, the organ systems in animals and plants.

Prerequisite: BIOL 1406: General Biology I

TEXTBOOK: *Campbell Biology, 10e*, Vol II Jane Reece, et al, Benjamin/Cummins Publishing Co., 2014

ISBN: 9781269751919 for 1407 HCCS Custom edition

LAB MANUAL: *Biology: A Hands-On Experience, 2nd edition*, Jyoti Wagle et. al. Royal Publishing Co., 2016

Course Student Learning Outcomes (CSLOs) for Biology 1407:

1. The student will be able to state observations and inferences leading to Darwin's Theory of Evolution by means of natural selection, including perform an experiment in population genetics and analyze the data using the Hardy-Weinberg equations; to understand the importance of fossils and be able to calculate the age of a fossil by means of isotopic decay.
2. The student will be able to explain the origin of species, the history of life on Early Earth, and to identify the key events in life's history, including the origins of single-celled organisms and the colonization of land.
3. The student will be able to describe the evolutionary history of biological diversity, from bacteria/archaea to protists, plants, fungi, and ultimately to animals/humans, including the structures, nutrition, reproduction, and characteristics of such organisms.
4. The student will be able to compare and contrast taxonomic, morphological, digestive, and reproductive characteristics of Mollusca, Annelida, Arthropoda, Chordata, and Vertebrata in the Kingdom Animalia.
5. The student will be able to understand the basic principles of animal form and function, including feedback control/homeostasis, to include the basic anatomy and physiology of the following animal organ systems: digestive, cardiovascular, respiratory, immune, excretory, endocrine, reproductive, and nervous systems.
6. The student will develop critical thinking, scientific problem-solving, and communication skills by successfully participating in a case study or course-specific research project.

7. The student will apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes, anatomical models, and other laboratory equipment to collect and analyze data.

ALL text reading, and chapter activities are to be completed the each week the chapter reading is assigned. Always bring textbook/lab manual to lecture/lab (LHSB315/316).

Tentative Lecture and Lab Schedule (A more complete version will be posted in LearningWeb shortly)

Week	Chapter	Lecture (Tuesday)	Lab (Thursday)
week 1	22	Evolution	Introduction, Review lab safety
week 2	23	Population Genetics	1. Natural Selection/Population Genetics
week 3	24, 25	Origin of Species, History of Life on Earth	
week 4	27, 28, 31	Phylogeny, Bacteria and Archaea, Protists, Fungi,	A) Phylogenetics
week 5	29, 30	Plants, Animal Diversity	2. Morphology and Simple Staining of Bacteria, 3. Kingdom Protista 4. A Brief Survey of the Plant Kingdom
week 6	32, 33	Invertebrates	5. A Brief Survey of the Animal Kingdom
week 7	34	Vertebrates	6. Human Evolution Review for Lab Practical
week 8	40	Animal Structure and Function	7. Animal Tissues
Week 9:	41	Animal Nutrition, Circulation and Gas Exchange	9. Digestive System
week 10	42 43	Immune system (read at home)	10, 11 Circulatory & Respiratory Syst.
week 11	44	Osmoregulation and	13. Excretory System

		Excretion	
week 12	48	Neurons	
week 13	49	Nervous Systems	16. Nervous System and Sensory Organs
week 14	50	Sensory and Motor Mechanisms	8. Fetal Pig dissection
week 15	52	Biome Presentations	Lab Practical
week 16		Finals week-No lab	

Instructional Methods:

I will provide materials in the form of lecture and Power Points which you can use while reading the textbook.

Because learning requires active (not passive) involvement on the part of the learner, you must come to class **prepared**. This includes having studied and being ready to work with all reading and other materials assigned prior to attempting any assessments. Minimum preparation is taking notes and thinking about personal application of the text material.

Instruction also includes use of lab materials and equipment through demonstration, and hands on lab activities. We will meet twice per week once in the laboratory to do lab exercises that help with understanding of the course material as well as once for lecture. You will complete the lab exercise in class and **turn it in at the beginning of the next Lab class for review**. During lab periods, we may also cover relevant lecture material as needed.

The course is an integration of 2 parts, lecture from a standard textbook and an in-class laboratory. Students must buy and read the correct textbook. The course includes notes on material covered in the text PowerPoints and links to Mastering Biology with many publisher resources plus the homework assignment. My lectures are not designed to be a comprehensive review, but an overview of material covered in the text with added insights provided by your instructor. They may be updated during the course.

EXAMS AND GRADING:

There will be a total of five lecture exams (four and a final). Each exam will contain a number (50-70) of multiple-choice questions. Multiple choice questions need to be answered on the scantron. Each exam may also have additional questions, which can be multiple choice, fill in the blanks, labeling or short essay. Each exam has an equal value as the other exams (14 pts each). The department final is required and worth 10 points.

All lecture exams are closed book. **NO MAKE-UP exams will be given with out documented emergency.**

The district-wide Biology program has instituted a district-wide compulsory standardized final. The questions will be tied to the SLOs stated in the syllabus for this course. This exam will be in addition to your fourth “Final” exam, and **will be part of your final grade (10 points)**

Homework Assignments: 6 points of your grade is with homework activities for each chapter through Mastering Biology. These activities may include questions and animations to answer. For each unit you will do the chapters for that unit and they are due before each lecture exam. The link to Mastering Biology is found in my Learning Web. I will give you information about how to login to Mastering Biology in class.

Lab Participation: This includes your activity in lab, as well as completion of the lab reports. This is worth 4 points toward your grade.

Biome Presentations: 10 points: You will be making a 20 minute small group presentation near the end of the semester. This will involve ongoing research about a biome and organisms that live in that biome (chapter 52). There will be a chapter quiz, and several update assignments for points along the way. Dates will be assigned along the way.

Lab Practicals: There will be two lab practicals during the course. These will be explained in detail during our lab sessions. Each practical will be worth 14 points.

An **Extra Credit** assignment at the HMNS may be done for no more than 3 points extra credit added to total points at end of semester. This will be available to all students. The HMNS has a free afternoon on Thursdays. More info will be given during the semester in class and posted online.

GRADE COMPUTATION

Lecture exams 3 (14 each), Final (10) & Lab practical exams 2 (14 each)	80 pts
Mastering Biology Homework Average/Lab reports	10 pts
Biome Presentation/Summary pamphlet	10 pts
Total	100 pts

SUGGESTED STUDY TIPS FOR GENERAL BIOLOGY!

1. You may find it helpful to define important terms, using notecards is a good way to do this. However, knowing the key terms just provides the **foundation** for understanding key concepts in biology. It is important to relate terms to each to fully understand and synthesize information we discuss.

2. Read the chapter outline at the end of each chapter.
3. Try to answer the questions at the end of each chapter. If you cannot figure out the answers, be sure to ask me when we have lab.
4. My Learning Web plus Mastering Biology has many resources from the publisher, including a glossary of terms, quizzes, animations and many interactive exercises that I will assign during the semester.
5. The college has a Biology Computer Lab for tutorials and classroom assignments.
6. Exchange phone numbers with some of your classmates; you may want to form a study group or need to find out about missed classes or assignment.
7. Open labs will be scheduled to review for the lab practicals. The schedule will be posted in class and online.
8. Lab study pages are available on line to review lab materials as well. Here is the link: <http://imc02.hccs.edu/BiologyLabs/index.html>

HCC Policy Statement: ADA

Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Ability Services Office at the respective college at the beginning of the semester. Faculty is authorized to provide only the accommodations requested by the Ability Support Services Office. (The Ability Support Services Office at Central is in the Learning Hub room 106, 713/718-6164.)

Disability Support Services Offices:

System: 713.718.5165

Central: 713.718.6164 – also for Deaf and Hard of Hearing Services and Students Outside of the HCC District service areas.

Northwest: 713.718.5422, Northeast: 713.718.8420

Southeast: 713.718.7218, Southwest: 713.718.7909

After student accommodation letters have been approved by the DSS office and submitted to DE Counseling for processing, students will receive an email confirmation informing them of the Instructional Support Specialist assigned to their professor.

Title IX Information

HCC is committed to provide a learning and working environment that discrimination on the basis of sex which includes all forms of sexual misconduct. the Education Amendments of 1972 requires that when a complaint thorough investigation is initiated. Complaints may be filed with the Coordinator available at 713 718-8271 or email at oiie@hccs.edu.

HCC Policy Statement: Academic Honesty

Scholastic Dishonesty as explained in the *Student Success Student Handbook* is as follows (I would suggest that you obtain a copy of the Handbook as it provides a good deal of material with which successful students are aware):

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.

“Scholastic dishonesty” includes, but is not limited to, cheating on a test, plagiarism, and collusion.

“Cheating” on a test includes:

- Copying from another student’s test paper;
- Using materials during a test that are not authorized by the person giving the test;
- Collaborating with another student during a test without authority;
- Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or part the contents of an un-administered test;
- Bribing another person to obtain a test that is to be administered.

“Plagiarism” means the appropriation of another’s work and the unacknowledged incorporation of that work in one’s own written work offered for credit.

“Collusion” means the unauthorized collaboration with another person in preparing written work offered for credit.

HCC Policy Statement: Student attendance, 3-peaters, withdrawal deadline

H.C.C.S. policy states that you can be withdrawn by your instructor after missing 12.5% of the course; in this course that is equal to 8 total hours. If you withdraw from a class for excessive absences, you will receive a grade of “W”. This is not negotiable and cannot be changed for a letter grade. If you are on financial aid or an F1 student, you may be particularly affected and could forfeit your financial aid or be out of compliance, and have your F1 status revoked. These are serious consequences, and it is your responsibility to maintain required attendance. Check with your instructor about specific attendance policies.

Final Withdrawal Deadline for Regular Term, Apr 5, 2016, 4:30pm HOW TO DROP

If a student decides to drop or withdraw from a class upon careful review of other options, the student can drop online prior to the deadline through their HCC Student Center.

HCC and/or instructors may drop students for excessive absences without notification (see Class Attendance below).

Students should check HCC’s Academic Calendar by Term for drop/withdrawal dates and deadlines. Classes of other duration (mini-term, flex-entry, 8-weeks, etc.) may have different final withdrawal deadlines. Please contact the HCC Registrar’s Office at 713.718.8500 to determine mini-term class withdrawal deadlines.

Repeat Course Fee: The State of Texas encourages students to complete college without having to repeat failed classes. If you repeat the same course more than twice you may be subject to higher tuition and fees (currently \$50 and \$3/CEU contact hour.) A course is considered a “repeat” if you received a grade of A-F, a W, or an I. Check with a counselor to see if this rule applies to any of your courses. A fuller discussion of the rule is on the homepage under Current Student and Admissions (scroll down).

INTERNATIONAL STUDENTS

International Students are restricted to ONLY ONE online/distance education class per semester. Please contact the International Student Office at 713-718-8520 if you have additional questions about your visa status.

NOTICE FOR STUDENTS OUTSIDE OF HCC SERVICE AREA

Students who live or work outside the HCC service area and cannot take paper exams at one of our HCC testing locations MUST make arrangements for a proctor. Please see the DE Student Services Additional Resources webpage for more information.

ONLINE TUTORING

HCC provides free online tutoring in writing, math, science, and other subjects. How to access AskOnline: Click on the Ask Online button in the upper right corner of the Blackboard course listings page. This directs students to the HCC AskOnline Tutoring site: <http://hccs.askonline.net/>. Use your student ID or HCC e-mail address to create an account. Instructions, including a 5-minute video, are provided to make you familiar with the capabilities of this service.

Success in this course depends solely on the individual student!

The following are strongly recommended for each student:

Read and understand all elements of the Syllabus, and Student handbooks. Give your instructor both day and evening phone numbers and your e-mail address.

Read and comprehend the required chapters in the textbook prior to lectures and the exams.

Successfully complete all requirements of this course as outlined in this document.

Contact me if you have any questions regarding any element of the course you do not understand.

HINT: Work hard from the beginning of the semester rather than playing "catch-up" during the second half of the semester!!

RULES, REGULATIONS AND OTHER INFO

1. Textbook and lab manual is required.
2. Full class attendance in lecture and lab is required. Students with more than four unexcused absences may result in an administrative withdrawal.

Students are responsible for everything covered during their absence, and it is the student's responsibility to consult with the instructor for make-up assignments.

3. **NO MAKE-UP EXAMS WILL BE GIVEN.** If you are late for a lecture or a lab exam, you will be allowed to take the exam 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.

4. The lecture exams will consist of various types of questions including multiple choice, completion, matching, diagrams, definitions and essays.

5. **Technology in the classroom:** NO technology (cell phones, computers, cameras, ear phones, etc.) are allowed in the classroom unless permitted by your professor. Cellular phones (and other technology) create annoying and unnecessary interruptions and distractions to you, your classmates, and the professor during class. Take the responsibility and be courteous, and show respect. Please **switch them OFF or leave them at home.** If unpermitted technology is used during a test, a grade of F will automatically be assigned.

6. No children are allowed in the laboratory.

7. Eating, drinking, or smoking is NOT allowed in the laboratory.

8. You must read the laboratory safety rules before doing any of the lab exercises.

9. The laboratory safety release form must be signed during the first lab session.

10. Lab reports are an important part of the course and to be handed in at the end of the lab period. Although students work in groups, individual active participation is expected. You are each responsible for the completion of your individual lab report.

11. Grades will not be posted at any time during the semester. You may contact me to find out about your status at any time during the semester. At the end of the semester, your grade will be available on the student system.

Have a GREAT SEMESTER and please remember to contact me if any questions arise!!

TIPS FOR NAVIGATING THROUGH THE COURSE:

My Learning Web page has the following:

- **Power Points:** Power Points are available for each chapter in pdf. Format. Study Topic Guides and other materials may also be posted here.

This Syllabus has been adapted from one created by Mrs. Marsha Turell, HCC, Central.

Get Started with Pearson's Modified Mastering

First, make sure you have these 3 things...

Email: You'll get some important emails from

Course ID: Your Course ID is: **central21375**

Access code or credit card: The required access code or by itself at your bookstore. Alternatively, you can use a credit card or PayPal account during registration.



Next, get registered!

1. Go to www.pearsonmylabandmastering.com.
2. Under the large **Register** section on the right side of the page, and click the **Student** button.
3. Read the onscreen instructions and click **OK! Register now**.
4. Next, enter the **Course ID** for your course (listed above).
5. After this, either **Create** a new Pearson username and password, or, if you've already registered for another Pearson product (i.e. MyMathLab), **Sign In** with that username and password.
6. On the next page, click the **Access Code** button if you purchased a package with an access code from the bookstore, OR purchase instant access now by clicking on the purchase options under the **Use a Credit Card or PayPal** section.
7. You are now registered! Now, it's time to sign. Go to www.pearsonmylabandmastering.com and click the **Sign In** button in the top right. Enter your username and password.

Need help?

Visit www.pearsonmylabandmastering.com/get-registered for:

- Helpful videos
- Frequently Asked Questions
- System Requirements
- Other helpful "getting started" info!

Or visit our 24/7 Technical Support site at <http://247pearsoned.custhelp.com>.