

# BRAZOSPORT COLLEGE

## SYLLABUS for Fall- 2015

### General Biology 1 Lab: BIOL 1106

**Instructor's Name:** Flo Courtney

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**This lab is an independent course. It is not tied to lecture; you will receive a separate grade.**

**Lab Manual:** *None*

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All required laboratory materials were developed via collaboration among Brazosport College Life Science Faculty. There will be posted online for you to download, print, and bring to lab with your Pre-Labs complete.

**Webpage to download handouts:**

<http://www.brazosport.edu/programs/WOL/Biology/Gen%20Bio%201%20Library/Forms/AllItems.aspx>

### Course Description

General Biology I 1106 is a laboratory course which allows you to investigate the fundamental principles governing living organisms using a hands-on approach. Topics covered include: the physical and chemical properties of life, the scientific method, biological structure and organization, the relationship between structure & function, the evolutionary mechanism and adaptation, binomial species classification, genetics, reproduction, and gene regulation.

### Course Goals

1. Students will become familiar with basic biological principles, theories, and terminology and become aware of the vibrant living world in which they live through coordinated laboratory exercises.
2. Students will be capable of distinguishing differences between qualitative and quantitative approaches in the Scientific Method, how these approaches differ from other means of inquiry, and will learn how Biologists communicate their findings.
3. Students will demonstrate knowledge of the chemical basis of life, basic cellular organization, nature of biological membranes, important biomolecules, cellular enzymes, DNA structure, photosynthesis, and genetics through hands-on lab activities.
4. Students will exhibit understanding of the genetic mechanisms underlying patterns of inheritance and phenotypic adaptation within the context of Darwinian evolution and speciation.
5. Students will understand the major successes and yet unsolved questions facing modern Biology, including issues that touch upon bioethics.
6. Students will develop an awareness of the interdependence of biology and biomedical technology, as well as their influence on and contribution to modern culture.
7. The laboratory course design also provides students majoring in a science with technical and equipment-based knowledge that serves as a basis for further study in biology.

### Fall 2015 Gen Bio 1106 Lab Schedule

Lab # / Date	Experimental Topic	Grade tracking
<b>Week of AUG 24: NO LABS (for Adds/Drops)</b>		
<b>Week of AUG 31: NO LABS:</b>		<b>Week of SEPT 7 (for LABOR Day)</b>
1) Sept 14	<b>Lab 1:</b> Introduction to Microscopes	
2) Sept 21	<b>Lab 2:</b> Acids, Bases, & Buffers	
3) Sept 28	<b>Lab 3:</b> Biologically Important Molecules	
4) Oct 5	<b>Lab 4:</b> The Crazy World of Cells	
5) Oct 12	<b>Lab 5:</b> Diffusion & Osmosis	
6) Oct 19	<b>Lab 6:</b> Enzymes at Work	
7) Oct 26	<b>Lab 7:</b> Cell Respiration & Photosynthesis	
8) Nov 2	<b>Lab 8:</b> Genetics & You	
9) Nov 9	<b>Lab 9:</b> C.S.I. & Strawberry DNA Isolation	
10) Nov 16	<b>Lab 10:</b> The Central Dogma and GMO PCR Lab 1	
	<b>WEEK OF NOV 23: NO LAB: THANKSGIVING</b>	
11) Nov 30	<b>Lab 11:</b> GMO PCR Lab 2 with Gattaca	
12) Dec 7	<b>Lab Final Exam (study all old quizzes to prepare)</b>	
<b>Remainder of semester: NO LABS</b>		

**Lab Mechanics:** Lab will consist of a variety of learning methods, including observation, experimental activities & techniques, while in groups of fellow classmates. This collaboration **does not give** students the **license** to copy answers, thoughts, or observations from their lab partners; it simply fosters **working together towards a common goal** (see *Academic Honesty* section for more details on this subject). **You must answer all questions for full credit. Each lab is worth 30 points total. There are 11 labs . Only the top 10 grades will be taken. The lowest lab grade (handout plus quiz) is dropped. That means there are 350 total points possible, including the Lab Final Exam (WORTH 50 PTS) If labs are not turned in on-time, 10% of the points are subtracted from your score (or 3 points out of the 30 points possible) for each day it is late. If you miss lab, attend another lab section during the week. There are no make-up labs. Be sure to tell the instructor to forward your lab grades to me. If this isn't possible because of an emergency, call/email your Instructor ASAP.**

The 30 points consists of 15 points from the daily quiz and 15 points from the lab material that you download. **Failure to do the pre-lab questions before lab results in 5 points being removed from the 15 points possible from the lab material.** The quiz each day covers the lab from the week before. Each week the lab material from the previous week will be turned in and a quiz over that material will be given. **The quiz will be at the beginning of the class. Don't be late.** The quiz and lab material will be graded and handed back the week after it is turned in, barring any emergency. You must pick up your papers each week. **This syllabus and all quizzes will be turned in on the day of the final exam.** These should be kept in a folder which will be handed in on the day of the final. This will take the place of the lab 11 quiz. There will

not be a quiz over lab 11. The final exam will be comprehensive covering material from all 10 of the quizzes. Correct any wrong answers so that you can study for the final.

Grade scale:

**A=315-350 pts    B=280-314 pts    C=245-279 pts    D=210-244 pts    F=209 and less**

**Each day when you come into the lab, hand in the previous week's lab and pick up any material that I have put out on the table. I will check the pre lab while you are taking the quiz, so the current lab handout should be out on the table during that time.**

**You registered for this class knowing that it was a 2 ½ hour lab. Please be prepared to be there the full time. Remember, there are no make-up labs.**

**Withdrawal policy:** The Brazosport College Science Department and I believe independent work is **critical** for the **comprehension** of material. You are responsible for withdrawing from the course if you feel life circumstances or your satisfaction level with the course warrants withdrawal. However, I will withdraw you from the course at my discretion if you fail to turn in labs consecutively for 3 or more weeks.

**Academic honesty policy:** The College and your instructor will assume that students eligible to perform at the college level are familiar with, and will abide by, the standard rules governing legal and appropriate conduct, especially with regard to academic honesty. Please refer to the BC Student Guide & Calendar for more information on Academic Honesty, which is available on the College homepage (mouse over "Students" tab, click on "Catalog & Schedule", click on "Student Guide & Calendar", click on "2014-2015 Student Guide & Calendar"). Briefly, **the central principle of academic honesty is that all work presented for a grade by you is yours only and yours alone.** Each student must do their **own work** (*meaning not written by someone else or copied from another individual*) on assignments. Academic dishonesty therefore includes, but is not limited to: cheating in any way, plagiarism of published or online material of any kind, and collusion (allowing or enabling a fellow student to cheat). Let me be crystal clear: **Cheating is NOT TOLERATED, under any context, in lecture or in lab. If you are caught cheating, plagiarizing, colluding to cheat you will be referred to the Dean of Student Services for review and assignment of punishment, which can include an F on the assignment/Exam in question, an F in the course, or (in rare cases or repetitive academic dishonesty) suspension.** If you are having trouble understanding any concepts or assignments please come to talk to me **before** your resort to cheating or colluding.

**Student services provided by Brazosport College:** To contact the Math/Science Division call (979) 230-3225. Information about the College Library is available on the website or by calling (979) 230-3310. The Student Services area provides the following services: Counseling and Advising at (979) 230-3040; Financial Aid at (979) 230-3294; and Student Activities at (979) 230-3355. Tutoring for Math, Reading, Writing, Environmental Science, Chemistry, and other subjects is available in the Student Success Center; please call (979) 230-3527 for more information.

**Students with disabilities:** Brazosport College is committed to providing equal education opportunities to every student. BC offers services for individuals with special needs and capabilities including counseling, tutoring, equipment, and software to assist students with special needs. Please contact Phil Robertson, Special Populations Counselor, at (979) 230-3236 for further information.

**Availability of your Instructor on Fridays, Weekends, or Holidays:** Unless indicated otherwise by your instructor during class, your instructor is not available by phone or email on Fridays – Weekends – or Holidays. Expect a **return phone call** or **email reply** from your instructor **ONLY** during standard business hours, Office hours, or hours listed on his Semester schedule posted for each class he teaches on the next business day. With regard to phone calls, your instructor ***only returns calls made by students who leave voicemail messages.***