



**BIOL 102 ISSUES & APPLICATIONS –
Syllabus for Summer
Universidad de Louisville**

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Office Hours: TBA

Class number:

Class schedule:

The class meets M, Tu, W, Th, & F from 8:00AM to noon . The first meeting is on Monday and the last meeting on Friday

Required Textbook: Concepts of Biology

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OpenStax College

Rice University

6100 Main Street MS-380

Houston, Texas 77005

This textbook can be downloaded as a PDF for free from

<http://openstaxcollege.org/textbooks/concepts-of-biology>

Course description and organization: This three credit hour course, designed for non-Biology majors, will acquaint you with the basic biological principles common to all living organisms. For many, but not all, students, Biology 104 (the companion laboratory course) is also required.

Course objectives: Upon successful completion of this course, students should have a basic understanding of:

1. The scientific method (true and false hypotheses, theories, variables, controls, experiments);
2. Basic chemical principles important to life (atoms, elements, molecules, bonds);
3. Cells (cell types, cell structure, cell metabolism: respiration and photosynthesis);
4. Basic description of diversity of life on the planet (plants, protists, bacteria, fungi, animals);
5. Cell division and its impact on growth, repair and reproduction (mitosis and meiosis);
6. Classical genetics and the inheritance of physical traits,

7. Gene replication and protein synthesis;
8. Evolution: population genetics, forces that cause micro-evolution, speciation
9. The interactions between organisms and their environments, population growth, community interactions, and ecosystem function (ecology).

Method of evaluation: The student's understanding and ability to use information will be evaluated through the use of in class exams and *in class pop-quizzes* as shown in the table below. The pop-quizzes will be unannounced and will generally occur at the beginning or end of lecture on a particular day. The pop-quizzes will be closed book, closed notes and independent effort and will cover material covered in lecture on that day or the previous day. There will be 6 pop-quizzes given during the semester and will count 10 points each. At the end of the semester the pop-quiz with the lowest score will be dropped thus up to 50 points may be earned through the pop-quizzes. The quizzes and exams will be closed book, closed notes and individual effort.

Pop-Quizzes	50 points
Quiz 1 (covers material from start of course)	25 points
Exam 1 (covers material from start of course)	100 points
Quiz 2 (covers material since Exam 1)	25 points
Exam2 (covers material since Exam 1)	100 points
Final Project (see below):	50 points
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	350 points

You are to bring pencils to each examination. Missed examinations or quizzes receive a score of zero. In certain special cases a student may take an exam a day early or late. In order to do so, a student must submit a written request to take the exam at a different time than is normally scheduled and receive a response from me indicating the requested change is acceptable. The request must be submitted at least 24 hours before the exam time. The request **must** provide documentation of a circumstance beyond the students control which will cause the exam to be missed. Such documentation is usually a letter from a relevant person who knows details of your situation and can be contacted by me (contact information must be supplied). If an exam is missed, the written request must be submitted to the instructor within **24 hours** after the missed exam and the student should be ready to take the exam immediately if the request is approved. All requests for reevaluation of the grading of exams must be submitted in writing. You must clearly state why you believe your answer is an acceptable answer. No academic misconduct will be tolerated.

Grading policy: Letter grades for the course will be determined entirely from the scores on the quizzes, exams and homework assignments. The maximum percentage cutoffs for letter grades A/A-/B+/B-/C+/C-/D+/D/D- are 93/90/87/83/80/77/73/70/67/63/60 %, respectively, of the total points. These cutoff points will not be raised but at my discretion may be lowered at the end of the semester. There will be **NO** extra credit in the course.

Additional course policies: It has been my experience students who do not attend class tend to not perform well on exams. You will find that attendance is necessary because some of the material covered in the lecture may not be found in the textbook. The textbook reading assignments will help elucidate the material and provide additional information for answers to the learning objectives. If any discrepancies arise between the lecture and textbook material, the lecture material is the correct source of information. All students are expected to read and abide by the policies concerning academic honesty and student misconduct as described in the class catalog. **If you are auditing the course**, you **must** attend lectures and take the exams. **If you are taking the course pass/fail**, you **must** pass the course to receive a passing grade.

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Final Project: The final project will be a required visit to Biomuseo in Panama City and a type written paper on a topic presented at Biomuseo. The paper **must** be at least **1250 words long**, type written with **12 point font** and **at most** double spaced. The paper **must** have at least 3 references in addition to Biomuseo which may be internet sites or news papers, magazines, or scientific publications. The paper should be submitted to the instructor by email (gacobb01@louisville.edu) and **MUST** have subject line **“Bio104 paper by last name, first name”**. Be sure you are familiar with the **University policies on plagiarism** and **make sure your paper does not contain plagiarized material**.

Tentative Lecture Schedule

Date	day	Chapters	Topics
TBA	M	1	Survey of Biology, Scientific Method, Theory of Evolution
		11	Evolution
TBA	T	2	Chemistry
TBA		2	Organic Molecules, Molecules in Living Systems
TBA	W		Quiz 1
TBA		3	Cell Structure and Function
TBA			Transport: diffusion and osmosis
TBA	Th	4	Cell Respiration
TBA		4	Cell Respiration
TBA	F	5	Photosynthesis
TBA			
TBA	M		Exam 1
TBA		6, 7	Asexual and Sexual reproduction
TBA	T	7, 8	Patterns of Inheritance, Sex determination
TBA		9	Molecular Biology of the Gene
TBA	W		Quiz 2
TBA		9	Gene Regulation
TBA		10	Gene Technology
TBA	Th	11	How Populations Evolve
TBA		12	How Biological Diversity Evolves
TBA	F		
TBA			Exam 2
TBA			Final Project Due