

California State University, Los Angeles
Department of Biological Sciences
BIOL 1010: General Biology, Fall 2019

Course Information

INSTRUCTOR INFORMATION

Instructors: Dr. Paul Narguizian

Office Location: Rosser Hall 323C

Telephone: 818.343.2054

Emails: pnargui@calstatela.edu

Office Hours: Tuesdays, 12:00 AM – 1:00 PM

Class Days/Time: Monday/Wednesday / 11:00 – 11:50 AM (lecture section: 01)

Lecture Location: ASCB 132

Prerequisites: None

Laboratory Instructor(s) Information:

92857 - 02 M **Luis Rosas**

92858 - 03 M **Mayra Torres**

93337 - 04 W **Luis Rosas**

93338 - 05 W **Mayra Torres**

Luis Rosa: email Luis.Rosa-Jr2@calstatela.edu; lrosa@calstatela.edu

Mayra Torres: email mtorres8@exchange.calstatela.edu

COURSE DESCRIPTION

This is an introductory biology course for non-majors with an emphasis on the process of science and principles common to all domains of life; topics include metabolism, inheritance, evolution, organismal structure and function. Lecture 2 hours, laboratory 3 hours. *No credit toward Biology major or minor.* This course satisfies the B2 (life science) lower division general education requirement.

The course will focus on unifying themes such as energy and information flow through biological systems, which integrate processes across multiple scales, from single cells and organisms to species and ecosystems. Following this approach, we will emphasize the commonality of plant and animal evolutionary solutions to shared challenges (e.g., energy acquisition, water and temperature balance, reproduction, receiving and responding to environmental signals, communication). Thus, the course will emphasize critical thinking by asking you to carefully consider the nature of the scientific evidence

discussed, and the integrity of public statements on this topic.

COURSE OBJECTIVES/OUTCOMES

Upon successful completion of this course, students will be able to:

1. Apply scientific reasoning and evaluate evidence to reach a conclusion (this includes applying the scientific method, demonstrating understanding of living and non-living aspects of the world you live in, of human cultural and scientific endeavors, and the structures and institutions that frame human interactions).
2. Compare plant and animal solutions to similar fundamental life challenges
3. Describe levels of organization and related functions in among various organisms.
4. Identify the characteristics and basic needs of living organisms and ecosystems.
5. Explain the processes of growth and development in individuals and populations.
6. Design and critically assess the scientific investigations they perform.
7. Demonstrate critical thinking skills.
8. Collect, interpret and present information (this includes demonstrating effective oral and written communication, thinking logically, creatively and critically, applying quantitative reason and skills to solve problems, and using technology effectively to gather and communicate information).

Specific Learning Objectives for BIOL 1010

1. Examine the relationship between the nature of science (NOS) and interpreting the biodiversity of life on Earth.
2. Identify and describe the properties of life.
3. Describe the levels of organization among living things.
4. Explain the flow of energy among organisms.
5. Explain how energy is utilized and transferred among organisms.
6. Analyze various metabolic pathways.
7. Discuss how enzymes function as molecular catalysts.
8. Describe what evolution is, the evidence for it, and how it operates resulting in changes in organismal structure and function.
9. Analyze the major kinds of interactions between organisms, and between organisms and their environment.
10. Explain the evolutionary and ecological basis of these interactions including, but not necessarily limited to, cost/benefit tradeoffs, sexual selection, and altruism.
11. Translate the potential benefits and consequences of conservation biology.
12. Evaluate how the actions of humans can destabilize interactions.
13. Evaluate media (e.g. newspaper stories) with a keener appreciation of the science behind the story.

Required Course Materials:

Instructor reserves the right to alter and/or amend the syllabus throughout the semester as necessary.

Required Readings, Articles, and Videos:

ALL reading materials, articles, multimedia, and videos will be provided by the instructor on the [CANVAS](#) course site for you to review.

Course Structure

Classes meet face-to-face twice a week, and you will also access an online platform using the Cal State LA learning management system called [CANVAS](https://calstatela.instructure.com/) [https://calstatela.instructure.com/] frequently to reinforce concepts covered in class. I will ask you to think at high cognitive levels beyond basic memorization of facts, and how to apply what you learn in this class to choices you make in your life.

Computer Requirements

You will need to have access to Word, Adobe PDF, and PowerPoint to complete reading and written assignments.

You will need to have an up-to-date browser, operating system and some additional software on your computer to take this class. Check [the ITS Helpdesk Student Resources page](#) for instructions. Some of the documents in this course will be available to you in PDF form. You will need download and install [Adobe Acrobat Reader software](#) on your computer.

Assignments and Grading Policy

Assessments are based on a detailed grading rubric developed for this course:

Grading Criteria / Points Possible:

Course Grading: Final grades will be based on the following combination of assignments:

50 points – In and Out of-Class Activities

50 points – Midterm Exam I

50 points – Midterm Exam II

50 points – Midterm Exam III

100 points – Comprehensive Final Exam

300 points – Laboratory Activities and Assignments (Detailed in the Laboratory Syllabus)

Total Course = 600 points

Grading Scale: You will receive a single grade for the lecture and lab portions of the course. Letter grades will be determined based on the grading scale below.

<u>Grade</u>	<u>Minimum Percent</u>
A	92
A-	90
B+	88
B	82
B-	80
C+	78
C	72
C-	70
D+	68
D	62
D-	60
F	<60

4. Policy: Everything submitted as an assignment, project, or discussion post must be original work. References to resource materials are expected and proper citation is required. Assignments are due on the dates specified. Late submissions will not be accepted.

Course Communication

Interaction with Instructor

The Instructor will make every effort to communicate frequently with students through announcements and postings within the Moodle site. I will post weekly announcements questions or comments about the course content and/or requirements in the *Announcements* forum.

As a student, you should expect to receive assignment feedback and responses to postings within 48 hours. The Instructor will post an announcement alerting the students if he or she will be unavailable for more than a day.

Email Policy

I will respond to a received email no later than close of work on the next day. I will post an announcement alerting you if I will be unavailable for more than a day. It is your responsibility to check your email daily for updates and announcements. Excessive

emails impact both the professor and the student. Please make sure you have a legitimate reason for emailing.

I will email you about:

- Questions arising from difficulty in understanding course content.
- Requests for feedback on a graded assignment.
- Private issues.

I will not respond to email about:

- Questions that are answered in the course information.
- Lacks a subject line clearly stating the purpose of the email.
- Raises an inappropriate question.

Questions:

In online courses it is normal to have many questions about things that relate to the course, such as clarification about assignments, course materials, or assessments. Please post these in the *Frequently Asked Questions* forum. I will NOT respond to general questions regarding the class content, etc. via email. Questions of a more personal nature (i.e. grades, missed exam, family emergency, etc.) can be sent to the Instructor via email to pnargui@calstatela.edu.

My Teaching Philosophy:

My teaching philosophy is grounded in high expectations, accountability, and belief in appropriate behavior conducive to learning. Five principles guide my teaching philosophy:

1. All students can become lifelong learners.
2. Significant change requires significant commitment and time.
3. Struggle is a necessary and important part of life.
4. Students must accept responsibility for their learning progress.
5. I will never do for students what students can do for themselves.

That said, I will work hard and use multiple ways of learning to help you succeed in this course. Hopefully we'll also have a few laughs as we go along.

Participation and Attendance:

Please arrive to class on time and ready to learn. I expect all students to attend every class session. There is plenty of research that shows final grades are positively correlated with attendance. To this end you will be able to earn *classroom activity* points in every class meeting, but cannot make them up if you are absent. Thus, if you miss more than two class meetings, your final grade will be negatively affected! Assignments are due at the start of class (or on your way out if we did it in class). You will talk and

work frequently in small groups, and sometimes present your ideas to the entire class. Most importantly, please do not disrupt the learning environment, rights, and property of others. Of course, all gadgets not conducive to learning in the course, such as cell phones/music devices/etc. should be turned off during class. Be honest, hold yourself accountable for your actions, and hold me accountable for mine.

Respectful Classroom Atmosphere:

This class is a “judgment-free zone” at all times. This means that when you disagree with somebody’s opinion on a subject, you do not have the right to sling insults, raise your voice, or criticize them. I most certainly encourage disagreement on controversial topics and conversations are livelier if people do disagree on a subject. However, polite civil disagreement and outright hostility are two very different things. I will not tolerate hostility in the classroom, and anyone participating in this behavior will be escorted out of the room and not allowed to return for the rest of the class period.

Math:

Every biologist uses math and statistics. In this course you will use some math as it applies to biology. This mostly includes making and interpreting graphs, but may also include calculating averages and variation around an average. I will help you and there will be chances to practice. NOTE: a calculator is good for this class.

Netiquette

When posting on the discussion boards and chat rooms it is important to understand how to interact with one another online, *netiquette*. You can read more about the rules of netiquette at [15 Rules of Netiquette for Online Discussion Boards](#)

Helpful Student Resources

Technical Resources

Information on Cal State LA technical support resources for students: [Technical Support](#)

Student Support Services

Information on Cal State LA student support resources for students: [Student Services](#)

Academic Support Services

Information on Cal State LA academic support resources for students: [Academic Support](#)

Canvas Mentor Site

Information for students on how to be a successful online student and how to use Canvas: <http://www.calstatela.edu/cetl/edtech/canvas>

Course & University Policies Student Handbook

Information on student rights and responsibilities, academic honesty, standards of conduct, etc., can be found in Schedule of Classes for the current quarter visit the Cal State LA [Schedule of Classes Information](#) under Policies and Procedures.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. Students should be aware of the current deadlines and penalties for adding and dropping classes by visiting the [GET home page](#). (Registrar news and information)

Americans with Disabilities Act (ADA)

Reasonable accommodation will be provided to any student who is registered with the Office of Students with Disabilities and requests needed accommodation. For more information visit the [Office for Students with Disabilities](#) home page. <http://www.calstatela.edu/osd>

Academic Honesty/Student Conduct

This link contains the Cal State LA Policies and Procedures on Academic Honesty: <http://ecatalog.calstatela.edu/content.php?catoid=12&navoid=842>

Academic Honesty: Many incidents of plagiarism result from students' lack of understanding about what constitutes plagiarism. However, you are expected to familiarize yourself with Cal State L.A.'s policy on plagiarism. All work you submit must be your own scholarly and creative efforts. Cal State L.A. plagiarism as follows: "At Cal State L. A., plagiarism is defined as the act of using ideas, words, or work of another person or persons as if they were one's own, without giving proper credit to the original sources."

Student Conduct: <http://ecatalog.calstatela.edu/content.php?catoid=12&navoid=843>

Course Outline/Schedule of Assignments:

NOTE:- ALL related topic readings, articles, and videos can be found on MOODLE!!!

Tentative Lecture Schedule:

WEEK	DATE	TOPIC(S)
1	Aug. 21	Welcome to the course: Origin Stories; Living Within a Universe Story Ways of Knowing; What is Science; Claim Testing; How Do We Know How the World Works?
2	Aug. 26	Beginning of the Universe; Story; Birth of the Universe
	Aug. 28	Nuclei and Bonding: Timing and Creativity; Expansion and Emergence; Atoms and Attraction; The Universe Becomes Transparent
3	Sep. 02	NO CLASS!!! Labor Day Holiday – University Closed
	Sep. 04	Galaxies Forming; Galaxy Clusters and a Multicentric Universe; Spiral Galaxies and the Birth of Stars; Galactic Relationship
4	Sep. 09	The Emanating Brilliance of Stars; The Birth of Stars; The Activity of Stars; The Explosion of Stars;
	Sep. 11	MIDTERM EXAM I
5	Sep. 16	Birth of the Solar System; Orienting Ourselves to the Planets; Dynamics of Earth; The Pull of the Moon/Tides
	Sep. 18	The Sun's Transformation of Matter Into Energy; Atmosphere and Ocean;
6	Sep. 23	Life's Emergence; Cell Membranes and Awareness; Photosynthesis;
	Sep. 25	Living Earth
7	Sep. 30	Living and Dying; Genetic Mutations and Natural Selection; Sensing and Seeing
	Oct. 02	Multicellularity and the Mind; Violence Destruction and Death;
8	Oct. 07	MIDTERM EXAM II
	Oct. 09	The Passion of Animals; Animal Mating; Female Choice; Parental Care
9	Oct. 14	The Origin of the Human; Human Flexibility; Symbolic Consciousness; Culture as Collective DNA;
	Oct. 16	Enveloping the Earth

10	Oct. 21	Becoming and Planetary Presence
	Oct. 23	How Do Earth and Life Interact: Part I
11	Oct. 28	How Do Earth and Life Interact: Part II
	Oct. 30	Biodiversity: Part I
12	Nov. 04	Biodiversity: Part II
	Nov. 06	Emerging Earth Community
13	Nov. 11	<i>NO CLASS!!! Veteran's Day Holiday – University Closed</i>
	Nov. 13	Animal Behavior and The Anthropocene: Part I
14	Nov. 18	Animal Behavior and The Anthropocene: Part II
	Nov. 20	MIDTERM EXAM III
Nov 25-27 (M-W) --		Fall Recess, No Classes - Campus Open – No Lectures or Labs This Week!!!
Nov 28–29 (Th–F) --		Thanksgiving Day Holiday; University closed
15	Dec. 02	Earth, Life, and the Future: Part I
	Dec. 04	Earth, Life, and the Future: Part II
16	Dec. 16	FINAL EXAM 9:30 AM – 11:30 AM