



## **BISC120Lg: General Biology: Organismal Biology and Evolution**

**Section: 13004R**

**4 units**

**Monday, Wednesday, Friday 9:00-9:50**

**Location: [Salvatori Computer Science Center](#) (SAL) 101**

**Instructor: Cameron Egan, Ph.D.**

**Office: AHF 141**

**Office Hours: Wednesday, Thursday 12:00-1:00 (or by appointment)**

- Office hours are open and dedicated entirely to you. During these hours I sit and excitedly wait for you to come to chat about biology (or anything you want really)!
- I also have availability outside of my scheduled office hours. Please contact me via email to set up an appointment.

**Contact Info: [camegan@usc.edu](mailto:camegan@usc.edu)**

**Lab Manager: Brett Spatola**

**Contact Info: [spatola@usc.edu](mailto:spatola@usc.edu)**

### **Course Description**

This 4-unit biology course will present several key topics in evolution, ecology, environment, and the diversity of life. These topics will be covered in weekly lectures (schedule below in syllabus) and a weekly laboratory section.

### **Learning Objectives**

At the end of the course, you will:

- Understand the steps involved in the scientific method.
- Understand how the scientific method is applied to key questions regarding the nature of life on Earth.
- Understand the various mechanisms that contribute to heredity.
- Understand the theory of evolution.
- Understand how evolution explains the diversity of life on Earth.
- Be familiar and knowledgeable about the defining characteristics of the domains Archaea, Bacteria, and Eukarya, with special attention to plants, fungi, and animals.
- Understand how the environment and organisms contribute to the evolution of ecological relationships.
- Understand how the environment has changed, continues to change, and how this affects the evolution of life on Earth.
- Be able to design and conduct scientific investigations.
- Be able to think critically about how experimental evidence answers a scientific question.
- Be able to perform biological laboratory techniques.

**Website:** <https://blackboard.usc.edu/>

Blackboard will be your home base for this course! Please check frequently for announcements and course materials including lecture notes, quizzes, additional/supplemental readings, and grades.

### Required Texts

Lecture: [Campbell Biology 12<sup>th</sup> ed.](#)

- New textbooks come bundled with online resources including Mastering Biology™ which is highly recommended for studying, but not required.
- Older versions of the text are fine to use, just be aware that figure and page numbers may differ from the latest version.

Laboratory: Labs will be posted as PDF files on Blackboard

### Evaluation Criteria and Grading

**Lecture Quizzes:** There will be 8 multiple choice quizzes to be completed on Blackboard during the semester. The quizzes will be posted at 8:00 P.M. on Fridays and will remain available until 9:00 A.M. the following Monday. Quizzes will be announced in lecture and on Blackboard.

**Exams:** The lecture portion of this course will include three midterm examinations and a final examination. All examinations (midterms and final) may include multiple choice questions, fill in the blanks, matching, definitions, short answers, and quantitative problems. The final exam is non-cumulative, effectively serving as a fourth midterm. Three midterms will be given during the Friday 2:00 P.M. quiz section.

**Laboratory:** Your laboratory score will be assessed within your respective laboratory section. Laboratory scores will be normalized as explained in the laboratory syllabus to correct possible differences in grading between laboratory instructors.

**Grading:** Your final grade in the course will be determined using the breakdown shown in Table 1 below. Grades will be updated continuously throughout the term as assessments are completed.

**Table 1.** Grading Breakdown

Assessment	Points	% of Grade
Midterm Exam 1 (Sept 15)	150	15%
Midterm Exam 2 (Oct 6)	150	15%
Midterm Exam 3 (Nov 3)	150	15%
Final Exam (not cumulative)	150	15%
Lecture Quizzes	72	7.2%
Laboratory	328	32.8%
<b>TOTAL</b>	<b>1000</b>	

**Tentative Lecture Schedule**

Following is a tentative schedule of topics for the term which may subject to modification dependent on time and learning needs.

Date	Deliverables	Class Topic	Readings/Preparation
21-Aug		Introduction to Course & pro tips on being successful in BISC120	Syllabus
23-Aug		Genetic Material	12.1, 16.1
25-Aug		Gene Expression	17.1
28-Aug		Genetics	13.1, 13.2, 13.3
30-Aug		Genetics continued	13.4, 14.1
01-Sep	Quiz 1	Genetics part III	14.2, 14.3, 14.4
04-Sep		<b>Labor Day - No class</b>	
06-Sep		Chromosomal Inheritance	15.1, 15.2, 15.3, 15.5
08-Sep	Quiz 2	Descent with Modification - Darwin	22.1, 22.2, 22.3
11-Sep		Evolutionary Mechanisms	23.1, 23.2
13-Sep		Evolutionary Mechanisms continued	23.3, 23.4
15-Sep	<b>Midterm 1</b>	Speciation	24.1, 24.2, 24.3
18-Sep		Origin of Life	25.1, 25.2
20-Sep		Origin of Life continued	25.3, 25.4
22-Sep	Quiz 3	Origin of part III	25.5, 25.6
25-Sep		Phylogenetics	26.1, 26.2
27-Sep		Phylogenetics continued	26.3
29-Sep	Quiz 4	Phylogenetics part III	26.4, 26.5
02-Oct		Viruses	19.1-19.3
04-Oct		Prokaryotes	27.1, 27.2
06-Oct	<b>Midterm 2</b>	Prokaryotes continued	27.3, 27.4
09-Oct		Prokaryotes part III	27.5, 27.6
11-Oct		Endosymbiosis	28.1
13-Oct		<b>Fall Recess - No class</b>	
16-Oct		Protist Diversity I	28.2, 28.3, 28.4
18-Oct		Protist Diversity II	28.5, 28.6, 28.7
20-Oct	Quiz 5	Plant Evolution & Early Evolving Terrestrial Plants	29.1, 29.2, 29.3
23-Oct		Evolution of Seed Plants	30.1, 30.2, 30.3
25-Oct		Evolution of Seed Plants	30.1-30.3

27-Oct	Quiz 6	Fungal Evolution	31.1-31.3
30-Oct		Fungal Diversity	31.4 - 31.5
01-Nov		Animal Diversity	32.1, 32.2
03-Nov	<b>Midterm 3</b>	Animal Diversity	32.3, 32.4
06-Nov		Invertebrates	33.1, 33.2, 33.3, 33.4
08-Nov		Vertebrate Evolution & Diversity	33.5; 34.4, 34.5
10-Nov		<b>Veterans Day - No class</b>	
13-Nov		Vertebrates - Mammals & Humans	34.6, 34.7
15-Nov		Levels of ecological organization and species distributions	52.2, 52.4
17-Nov	Quiz 7	Biotic interactions in Ecology - Populations	53.1, 53.2, 53.3
20-Nov		Biotic interactions in Ecology - Communities	54.1, 54.2
22-Nov		<b>Thanksgiving Holiday - No class</b>	
24-Nov		<b>Thanksgiving Holiday - No class</b>	
27-Nov		Changes in Biodiversity - Natural	54.4, 54.3
29-Nov		Changes in Biodiversity - Anthropogenic (a bit of a bummer)	56.1, 56.4
01-Dec	Quiz 8	Conservation & Sustainability (ending on a positive note)	55.5; 56.2, 56.3, 56.5

### Course Specific Policies

Communication – I am here to support you in your learning and want you to be in contact with me as much as possible. The best way to reach me is by email. Please be sure to include the course and section number in the subject line (**BISC121Lg/13004R**). I do my best to respond to emails within 24hr (during the week) and on Monday if your email is sent over the weekend. If it has been more than 24hrs please send me a gentle reminder. Also please remember there are a lot of you and only one of me!

Policy on Re-grading Exams – If you feel that an error was made in the grading of an exam, you need to do the following: 1) Check the answer key with your TA, 2) Prepare a **printed statement** explaining why you feel your grade was incorrect, and 3) submit your printed statement, Re-grade Request Form (downloaded from Blackboard) and your original exam to your TA within one week of the time the exam was returned to you. The TA will either handle the re-grade consult with the professors. The entire exam will be re-graded and, as a result, your grade may increase or decrease from a requested re-grade. No frivolous reasons will be accepted for requesting grade changes; stated reasons for a grade change must be legitimate (e.g., error in totaling the score).

Policy on Missed Lecture Exams – No make-up lecture exams will be given in this course. You may be excused from an exam in the event of a documented illness, emergency, or other serious problem beyond your control. No other excuses for missing exams will be accepted. If you miss an exam for a legitimate reason, and wish to ask for accommodation, you should proceed as follows. Within 48 hours of the missed exam, send an email to the Lab Manager requesting that you be excused.

In the case of illness, this request must include either an official letter from your doctor stating that you were too sick to take the exam, or your doctor's name and contact information with permission for us to contact the doctor for a limited discussion of your condition. Note that neither you nor the doctor need tell us the nature of your illness.

If you miss an exam for non-illness related reasons, you must provide similarly convincing documentation of the emergency to the Lab Manager within a week. If we judge your excuse to be valid, we will give you a grade for the missed exam equal to the average of your grades for the equivalent exams that you did take. Except in extraordinary circumstances, we will make accommodations for only one missed lecture exam. If your excuse is judged not to be valid, or you do not provide it within the allotted time, you will receive a score of zero for the missed exam.

**If you miss the final exam** and have provided a valid medical excuse to the Lab Manager within 48 hours of the exam time, a final course grade of Incomplete (IN) will be recorded and you will be permitted to take a make-up final exam during the following semester.

Policy on Missed Lecture Quizzes – **No make-up lecture quizzes will be given in this course.** You may be excused from a lecture quiz only in the event of a documented illness.

Extra Credit – **No extra credit will be given** for special projects, etc.

Impairments Affecting Your Performance – Students occasionally encounter difficulties that affect their academic performance, such as illness, accidents, bereavement, depression, anxiety, learning disabilities, and other problems. If you encounter such difficulties, please bring them to the attention of one of the instructors. We can refer you to resources and may be able to offer accommodation. All such discussions will be confidential. Please seek help as soon as you feel your performance is being affected.

### **Course Content Distribution and Synchronous Session Recordings Policies**

USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment.

Recording a university class without the express permission of the instructor and announcement to the class, or unless conducted pursuant to an Office of Student Accessibility Services (OSAS) accommodation. Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study. This includes but is not limited to providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the internet, or via any other media. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

### **Course Evaluations**

Course Evaluations will be conducted towards the end of the semester and will appear in the 'Course Evaluations' tab on the Blackboard. It is an important review of your experience in the class with the intent being for you to provide feedback on my teaching practice. Please take the

time to complete these evaluations as I use these to help improve/strengthen my teaching. I welcome all constructive feedback!

## **Statement on Academic Conduct and Support Systems**

### **Academic Integrity:**

The University of Southern California is a learning community committed to developing successful scholars and researchers dedicated to the pursuit of knowledge and the dissemination of ideas. Academic misconduct, which includes any act of dishonesty in the production or submission of academic work, compromises the integrity of the person who commits the act and can impugn the perceived integrity of the entire university community. It stands in opposition to the university's mission to research, educate, and contribute productively to our community and the world.

All students are expected to submit assignments that represent their own original work, and that have been prepared specifically for the course or section for which they have been submitted. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s).

Other violations of academic integrity include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), collusion, knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university. All incidences of academic misconduct will be reported to the Office of Academic Integrity and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see [the student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

### **Students and Disability Accommodations:**

USC welcomes students with disabilities into all of the University's educational programs. [The Office of Student Accessibility Services](#) (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at [osas.usc.edu](http://osas.usc.edu). You may contact OSAS at (213) 740-0776 or via email at [osasfrontdesk@usc.edu](mailto:osasfrontdesk@usc.edu).

### **Support Systems:**

[Learning Support & Resources](#) - You are part of a learning community made up of faculty, staff, and fellow students. Follow the link to find resources to help support your academic growth and success!

[Counseling and Mental Health](#) - (213) 740-9355 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

[988 Suicide and Crisis Lifeline](#) - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

[Relationship and Sexual Violence Prevention Services \(RSVP\)](#) - (213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

[Office for Equity, Equal Opportunity, and Title IX \(EEO-TIX\)](#) - (213) 740-5086

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

[Reporting Incidents of Bias or Harassment](#) - (213) 740-5086 or (213) 821-8298

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services \(OSAS\)](#) - (213) 740-0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

[USC Campus Support and Intervention](#) - (213) 740-0411

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

[Diversity, Equity and Inclusion](#) - (213) 740-2101

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

[USC Emergency](#) - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

[USC Department of Public Safety](#) - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call

Non-emergency assistance or information.

[Office of the Ombuds](#) - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](mailto:otfp@med.usc.edu) - (323) 442-2850 or [otfp@med.usc.edu](mailto:otfp@med.usc.edu)

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.