BISC 120Lg Lecture Syllabus, Summer 2015
General Biology: Organismal Biology and Evolution

~ May 11, 2016 version ~

Overview	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 a series of four weekly lectures (Monday, Tuesday, Wednesday, and Thursday) and two weekly laboratory sections (Tuesday and Thursday).
Faculty Instructors	Dr. Oliver Rizk, AHF 135, 213-740-4862, orizk@usc.edu Dr. Andrew Gracey, AHF 231, 213-740-2288, gracey@usc.edu
Lab Manager	Gorjana Bezmalinovic, ZHS 362, 213-740-6078, bezmalin@usc.edu
Textbooks	Lecture Campbell Biology 10th ed., 2014. (new textbooks come bundled with Mastering Biology™ which is recommended for studying but not required) Laboratory General Biology Laboratory Manual **FALL 2015**, BISC 120 & BISC 121 Courses, USC. Adams & Crawley (2013). Van De Graaff's Photographic Atlas for the Biology Laboratory, 7th ed. Pechenik. A Short Guide to Writing About Biology. 8th ed. (e-copy included with the USC custom textbook)
Website	https://blackboard.usc.edu/ (site for course materials, lecture notes, quizzes, additional readings, grades, etc.)
Lecture times	Monday, Tuesday, Wednesday, Thursday 10:00 A.M. – 12:05 P.M. in ZHS 352
Laboratory times	Tuesday and Thursday 1:00 – 3:50 P.M. in ZHS 365 and ZHS 369
Office Hours	Rizk: Monday and Wednesday, 1:00 to 2:00 P.M. Gracey: Monday and Wednesday, 12.05 to 1.00 P.M.
Exams	The lecture portion of this course will include four exams (two from each professor). All exams may include multiple choice questions, matching questions, fill-in answers, true/false answers, short answers, short essays, definitions, and quantitative problems. Students must take all four lecture exams to complete the course and complete at least 80% of the assigned laboratory activities. Exams completed by students may be photocopied by the instructional staff.
Lecture Quizzes	Five lecture quizzes (each worth 9 points) will be administered online via Blackboard. The quizzes will be posted by 2:00 pm on Fridays and will remain available until 9:00 am the following Monday. The first quiz will be posted on May 20. Questions will cover the following week's material. Answers to quiz questions will be posted at the end of each quiz period.

Grading

After each exam, grade point cut-offs will be released. There is not an absolute number of points that predetermines a letter grade of A, A-, B+, B, B-, etc. The final letter grade for the course will be assigned on a curve, determined by the total number of points as given below.

Exam 1	160
Exam 2	160
Exam 3	160
Exam 4	160
Lecture Quizzes	45
Laboratory Assignments	315
TOTAL POINTS IN COURSE	1000

Laboratory scores will be normalized as explained in the laboratory syllabus in order to correct for possible differences in grading between teaching assistants (TAs).

Schedule of lecture topics (subject to modification of specific topics and reading assignments*):

Day		Lecturer	Lecture		Readings
Wed	May 18	Rizk/Gracey	1	Introduction to the Course	Course Syllabus
		Rizk		Variation; Genetic Material and Expression	12.1, 16.1, 17.1
				Mendelian Inheritance	14
Thu	May 19	Rizk	2	Molecular Basis of Inheritance	15
				The Darwinian Revolution	22
Mon	May 23	Rizk	3	Evolutionary Mechanisms	23, 25.6
Tue	May 24	Rizk	4	Origins of Life	25.1-25.4
				Phylogenetic Systematics	26
Wed	May 25	Rizk	5	Prokaryotes 1	27.1-27.4
Thu	**May 26**	**Rizk**		**EXAM 1**	
Mon	**May 30**			**Memorial Day – NO CLASS!**	
Tue	May 31	Rizk	6	Prokaryotes 2	27.5-27.6
Wed	June 1	Rizk	7	Viruses	19
Thu	June 2	Rizk	8	Protists	28
				Fungi	31.1-31.3, 31.5
Mon	June 6	Rizk	9	Plants 1	29
Tue	June 7	Rizk	10	Plants 2	30
Wed	**June 8**	**Rizk**		**EXAM 2**	
Thu	June 9	Gracey	11	Evolution of Development	32
Mon	June 13	Gracey	12	Animal Diversity – Invertebrates 1	32 & 33
Tue	June 14	Gracey	13	Animal Diversity – Invertebrates 2	32 & 33
Wed	June 15	Gracey	14	Animal Diversity – Invertebrates 3	32 & 33
Thu	**June 16**	**Gracey**		**EXAM 3**	

Mon	June 20	Gracey	15	Animal Diversity – Vertebrates 1	34
Tue	June 21	Gracey	16	Animal Diversity – Vertebrates 2	34
Wed	June 22	Gracey	17	Ecology and Biosphere 1	52-56
Thu	June 23	Gracey	18	Ecology and Biosphere 2	52-56
Mon	June 27	Gracey	19	Ecology and Biosphere 3	52-56
Tue	**June 28**	**Gracey**		**EXAM 4**	

*Additional readings for specific lectures will be posted on Blackboard during the semester.

Course Policies

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, 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 examination was returned to you. The TA will either handle the re-grade or 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. If you have to miss a lecture exam due to religious holiday (http://orl.usc.edu/religiouslife/holydays/absences.html) or university-sanctioned event (e.g., student athletes with away-games) you must notify the Lab Manager at least 7 days in advance. If you miss an exam due to medical illness you must present a valid medical excuse to the Laboratory Manager **within 48 hours** of the missed exam. The excuse cannot be to attend a dental appointment, a conference, or other similar reasons. The reason for missing an exam must be of a medical nature or totally unavoidable (e.g., a verified automobile collision on the day and time of the examination). Remember that the USC Student Health Center does not provide routine medical excuses. You should notify the Laboratory Manager in writing that you were seen by a doctor, making sure that you include: 1) the doctor's name and telephone number, and 2) a statement authorizing us to discuss with the doctor whether you were too ill to take the examination. We will contact the doctor and decide whether or not you have a valid excuse. If the excuse is valid, your grade for that exam will be pro-rated based on the average of your other comparable exams and the class average for that particular test. An invalid excuse will result in a score of zero for the missed exam.

If you miss the final exam and have provided a valid medical excuse to the Laboratory Manager **within 48 hours of the examination time,** a final course grade of incomplete (IN) will be recorded and you will be permitted to take a make-up final examination during the following semester. **You will receive zero points for an exam if you miss it for an invalid reason.**

Extra Credit

No extra credit will be given for special projects, etc.

Students with Disabilities

Students requesting academic accommodations based on a disability are required to register with the Office of Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Be sure that the letter is delivered to the Laboratory Manager as early in the semester as possible, preferably by May 24, 2016. DSP is located in STU 301 and is open from 8:30 a.m. to 5:00 p.m., Monday through Friday. The telephone number of DSP is 213-740-0776. If a student's approved accommodation is limited to extra time on examinations, the teaching staff of BISC 120 will provide the accommodation. For any other accommodation, such as a private room, computer, scribe, etc., students must make prior arrangements with the DSP office 2 weeks before the exam date. For more information please visit the following website:
http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html

Statement on Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. Scampus, the Student Guidebook, contains the Student Conduct Code in Section 11.00: http://web-app.usc.edu/scampus/1100-behavior-violating-university-standards-and-appropriate-sanctions/, while the recommended sanctions are located in Appendix A. Students will be referred to the Office of Student Judicial Affairs and Community Standards (SJACS) for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: http://www.usc.edu/student-affairs/SJACS/.

Website

Students are responsible for logging onto Blackboard (https://blackboard.usc.edu) and checking the course website on a regular basis. Postings on Blackboard will be an official source for announcements, course materials, lecture notes, lab notes, score postings and general discussions. Weekly quizzes will also be completed on Blackboard.

Gift Policy

No gifts or presents of any kind are permissible to give to any of the instructional staff.

Final Comments

No exceptions will be made to these policies under most circumstances. If you think that the instructor or TA has granted you **any deviation** from the policies in this document and associated course syllabus, you must obtain their **written agreement** to support that claim.

BISC 120 Laboratory Syllabus

Lab Manager:	Gorjana Bezmalinovic	ZHS 362	Tel/Fax 213-740-6078

E-mail: bezmalin@usc.edu
Office hours: Open door policy

Laboratory Schedule:

Lab #	Date	Laboratory	Lab Manual
1	May 19	Laboratory Safety	page ix
		The Microscope	Chapter 1
2	May 24	Scientific Investigation/ Evolution	Chapter 2/Chapter 3
		(Prepare plates!)	
3	May 26	Bacteria*	Chapter 5
4	May 31	Protists	Chapter 6
		(*Bacteria and Antibiotics Lab Report DUE*)	
	June 2	LAB EXAM 1	
5	June 7	Plant Diversity I & II	Chapter 8 & 9
		(Cut planaria!)	
6	June 9	Animal Behavior	Chapter 4
7	June 14	Animal Diversity I: Invertebrates*	Chapter 10
8	June 16	Animal Diversity II: Echinoderms and Chordates	Chapter 11
9	June 21	Ecological Relationships	Chapter 12
		(Planaria Regeneration Lab Report DUE)	
	June 23	LAB EXAM 2	
	June 28	Graded lab assignments returned to students	

* Exercise for which lab report is required.

Tide Pools Field Trip – TBA

The Lab Manager reserves the right to make adjustments during the semester.

Required Textbooks available at the USC bookstore:
General Biology Laboratory Manual FALL 2015, BISC 120 & BISC 121 Courses, USC.
Recommended textbooks:
Adams & Crawley (2013). Van De Graaff's Photographic Atlas for the Biology Laboratory, 7th ed.

Pechenik. A Short Guide to Writing About Biology. 8th ed. (e-copy included with the USC custom textbook).

LABORATORY POINT DISTRIBUTION

The laboratory portion (315 points) will count for 30% of your final course grade, distributed as follows:

Lab Quizzes (9 – 7 points each)	63 pts
Lab Reports (2 – 45 points each)	90 pts
Lab Exams (2 – 50 points each)	100 pts
Tide Pools Field Trip	22 pts
Lab Manual (2 points per chapter)	20 pts
Lab Participation (2 points per lab)	20 pts

LABORATORY PERFORMANCE GUIDELINES

You are required to attend all lab sessions. Any unexcused absences will seriously affect your evaluation and lab participation points. Come to lab on time. You are also to remain for the entire lab session or until excused by your instructor. DO NOT make any other appointments for the time you are scheduled to be in lab.

You are required to wear closed toe shoes, long pants and a lab coat. Goggles will be provided in lab.

Before you begin the lab exercise, make sure that you remove all unnecessary materials from your work area. At the end of the lab session, clean and return all supplies to their proper place, clean your work area, and slide your chair under the table. Check with your instructor before leaving.

NO EATING OR DRINKING IS ALLOWED IN THE LABORATORY UNDER ANY CIRCUMSTANCES.

LAB QUIZZES

Each student will take a quiz during the first 5 minutes of each lab session. Students who come late to lab without a legitimate and verifiable excuse will not be allowed to make up the quiz. Quizzes will consist of multiple choice questions and/or fill-in-the-blanks. Out of 7 questions, 4 will test you on the knowledge of the material you will be covering that day in lab, and the other 3 will test you on what you have learned in the previous lab.

LAB MANUAL

During each lab students need to record their results (drawings, observations, calculations) in their lab manual. Tables need to be filled and all post-lab questions answered. Each student is required to show his/her TA the lab manual before leaving the lab and obtain their signature. Lab manuals will be checked periodically throughout the semester.

LAB REPORTS

Two lab reports will be written during the semester. Lab reports must be posted on Blackboard (*Lab Reports* turnitin link) and a hard copy turned in at the beginning of the lab session. Lab report guidelines will be posted on Bb (https://blackboard.usc.edu/) in the beginning of the semester.

LAB EXAMS

The two lab practical exams will test your understanding of the topics and exercises covered in the laboratory sessions. You will have a written portion and a practical portion (being able to use a microscope to identify different organisms). The first lab exam will cover material covered in labs 1 – 4, while labs 5 – 9 will be covered on the second exam.

Missed Lab Exam: *It is your responsibility to be present on the days of the lab practical exams.*

If you miss a lab exam due to a serious illness, you must present a valid excuse to the Lab Manager Gorjana Bezmalinovic (bezmalin@usc.edu) within 48 hours of the missed exam. A valid excuse is considered to be an official note from your doctor or the "Authorization for Disclosure of Medical Information" form from the USC Engemann Student Health Center (the '*Professor's Limited Discussion'* form). Note that neither you, nor your doctor, need to tell us the nature of your illness; we just want to verify whether you were too ill to take the exam. If you miss an exam for non-illness related reasons, you must provide similarly convincing documentation of the emergency to the Lab Manager. If we judge your excuse to be valid, you will be allowed to take the exam in another lab section that week. If you do not have a valid excuse or fail to provide it within the allotted time, you will receive zero points for the missed lab practical exam.

MISSED LABS

If you miss a scheduled lab exercise due to illness or emergency, please contact the Lab Manager (bezmalin@usc.edu) to see whether it will be possible to make up the exercise by attending an alternative lab section. For logistical reasons, it will not be possible to make up a missed lab exercise after Friday afternoon of the week in question. Therefore, students with labs scheduled on Fridays will have little or no alternative should they miss lab unexpectedly. Only a few requests for alternative labs can be accommodated, because few sections have available space. Therefore, it is very important for you to attend your scheduled lab section.

Students who wish to miss a lab for observance of a religious holy day should be aware of the University's policy on such absences, published at: http://orl.usc.edu/religiouslife/holydays/absences.html. Requests for such absences should be made by email addressed to the Lab Manager (bezmalin@usc.edu) at least 2 weeks in advance of the absence. If the absence is approved, the instructors will determine a reasonable accommodation for the student.

Student-athletes who must miss occasional labs for legitimate reasons should bring the SAAS excuse letter to the Lab Manager at least 2 weeks in advance so alternatives can be arranged.

Please note that no lab make-ups will be allowed during the week prior to a holiday, and for school-unrelated activities.

TIDE POOLS FIELD TRIP

This project is designed to provide you with an opportunity to explore the marine (intertidal) environment, observe animals and plants from a diverse array of phyla/divisions, and learn how animals and plants interact with each other and their environment. We will go to the beach located between the *Royal Palms State Beach* and *Point Fermin Park* in San Pedro**.** All the necessary information regarding this field trip will be posted on Blackboard (https://blackboard.usc.edu/) at the beginning of the semester.

LAB SCORES

You can find scores for all of your lab assignments on Blackboard: https://blackboard.usc.edu. Your lab scores will be posted under your LAB SECTION. Be sure to check for additional postings on a regular basis. It is

the student's responsibility to immediately notify his/her Lab Instructor or Lab Manager in the event of any mistakes, so please check your scores on Blackboard weekly.

LAB SCORE NORMALIZATION*

The lab scores will be normalized at the end of the semester by the Lab Manager to correct for differences in grading between Lab Instructors (TAs). In this procedure, the mean total score of all students in each lab instructor's lab section is compared to the mean total score of the entire class and each student's score is adjusted.

* If there are two or more lab instructors (TAs).

STUDENTS WITH DISABILITIES

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