

BISC 120Lg MWF Lecture Syllabus, Fall 2013

General Biology: Organismal Biology and Evolution

~ July 25th 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 weekly lectures (Monday, Wednesday, and Friday of each week) and one weekly laboratory section.
- Faculty Instructors: Dr. Suzanne Edmands, AHF 316, 213-740-5548, sedmands@usc.edu
Dr. Cornelius Sullivan, AHF 107C, 213-740-6712, csulliva@usc.edu
Dr. Wiebke Ziebis, AHF 334, 213-821-1198, wziebis@usc.edu
- Lab Manager: Gorjana Bezmalinovic, ZHS 362, 213-740-6078, bezmalin@usc.edu
- Textbooks: Lecture
Campbell Biology 9th ed., 2011. (new textbooks come bundled with Mastering BiologyTM which is recommended for studying but not required)
- Laboratory
General Biology Laboratory Manual FALL 2013, 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: M, W, F 9-9:50 A.M. THH 101 (=13004R), M, W, F 10-10:50 A.M. THH 101 (=13005R)
- Laboratory times: Various times in ZHS 361, 363, 365 and 369
- Office Hours: Edmands: 11:30 A.M. – 12:30 P.M. Mondays and Wednesdays in AHF 316
Sullivan: 11:30 A.M. – 12:30 P.M. Mondays and Wednesdays in AHF 107C
Ziebis: 11:30 A.M. – 12:30 P.M. Mondays and Wednesdays in AHF 334
- Lecture Quizzes: There will be twelve multiple choice quizzes to be completed on Blackboard (<https://blackboard.usc.edu/>) during the semester. The quizzes will be posted at 12:00 P.M. (noon) on Fridays and will remain available until 9:00 A.M. the following Monday. Answers to quiz questions will be posted on Monday afternoons.
- Exams: The lecture portion of this course will include three mid-term examinations and a comprehensive final examination. All examinations (mid-terms and final) may include multiple choice questions, fill-in answers, short answers, short and long essays,

definitions, and quantitative problems. The final examination will include material composed of questions that integrate concepts developed throughout the course, both in the lecture and the laboratory portions. To be assigned a final letter grade at the end of the course, a student must take at least two mid-term lecture examinations and the final examination and have completed at least 75% of the assigned weekly laboratory activities. Any document associated with grading may be photocopied by the instructional staff.

Grading: After each examination, 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.

The point system will total **1000 points**, as follows:

Midterm 1 Lecture Examination	150
Midterm 2 Lecture Examination	150
Midterm 3 Lecture Examination	150
Lecture Quizzes	24
Final Lecture Examination (cumulative)	226
Laboratory Reports and Examinations	300

Laboratory scores will be normalized as explained in the laboratory syllabus in order to correct for possible differences in grading between teaching assistants (TAs). Final grades that are borderline (for example, ± 10 pts from a grade cut-off line) will receive a grading decision based on attendance, effort, participation in the laboratory etc. TAs will evaluate the total performance of the students and give students a "+" (e.g., if within ± 10 pts of grade cut-off, a grade might be raised from a B to a B+, or a B+ to A- etc.), or a "0" (borderline grade stays the same), or a "-" (grade might be lowered, e.g., B+ to B).

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

Day	Quiz	Lecturer	Lecture	Readings
M Aug 26		Edmands	1 Course Introduction	Syllabus
W Aug 28		Sullivan	2 Overview – Medical Relevance	1.1
F Aug 30		Edmands	3 Patterns of Inheritance	14.1-14.4
M Sep 02			LABOR DAY HOLIDAY – NO CLASS	
W Sep 04		Edmands	4 Molecular Basis of Inheritance	15.1-15.3, 16.1
F Sep 06	Quiz 1	Edmands	5 The Darwinian Revolution	22.1, 22.2
M Sep 09		Edmands	6 The Case For and Against Evolution	22.3
W Sep 11		Edmands	7 Evolutionary Mechanisms I	23.1-23.2
F Sep 13	Quiz 2	Edmands	8 Evolutionary Mechanisms II	23.3-23.4
M Sep 16		Edmands	9 Speciation	24.1-24.2
W Sep 18		Edmands	10 Macroevolution	24.4, 25.5-25.6
F Sep 20	Quiz 3	Edmands	11 Phylogenetic Systematics	26.1-26.3

M	Sep 23		Edmands	12	Insights from Molecular Systematics	26.4-26.6
W	Sep 25		Edmands	13	Behavioral and Social Evolution	51.1-51.4
F	Sep 27	Quiz 4	Edmands	14	Conservation Genetics	56.1-56.2
M	Sep 30		Edmands		EXAM 1	
W	Oct 02			15	Origins of Life	7.1-7.2 25.1-25.4
F	Oct 04	Quiz 5	Sullivan	16	Prokaryote Structure/Function Bacteria and Cell Membranes	27.1-27.2 7.3 -7.4
M	Oct 07		Sullivan	17	Nutritional and Metabolic Adaptations, Prokaryotic Phylogeny and Role in Biosphere	27.3-27.5
W	Oct 09		Sullivan	18	Viruses	19.1-19.2
F	Oct 11	Quiz 6	Sullivan	19	Plant and Animal Viruses	19.2
M	Oct 14		Sullivan	20	Genomes and Their Evolution	21.1-21.4
W	Oct 16		Sullivan	21	Protists Origin and Diversity	28.1- 28.6
F	Oct 18	Quiz 7	Sullivan	22	The Fungi	31.1-31.3, 31.5
M	Oct 21		Sullivan	23	How the Plants Colonized Land	29.1-29.3
W	Oct 23		Sullivan	24	Plant Structure and Diversity	30.1-30.4, 35.1-35.4
F	Oct 25	Quiz 8	Sullivan	25	Plant Transport	36.1-36.5
M	Oct 28		Sullivan	26	Soil and Nutrition	37.1-37.3
W	Oct 30		Sullivan		EXAM 2	
F	Nov 1	Quiz 9	Ziebis	27	Overview – Environmental Importance	52.1 (1144-1145)
M	Nov 04		Ziebis	28	History of Animal Life on Earth	32 & 33
W	Nov 06		Ziebis	29	Animal Diversity – Invertebrates 1	32 & 33
F	Nov 08	Quiz 10	Ziebis	30	Animal Diversity – Invertebrates 2	32 & 33
M	Nov 11		Ziebis	31	Animal Diversity – Invertebrates 3	32 & 33
W	Nov 13		Ziebis	32	Animal Diversity – Invertebrates 4	32 & 33
F	Nov 15	Quiz 11	Ziebis	33	Vertebrates 1	34
M	Nov 18		Ziebis	34	Vertebrates 2	34
W	Nov 20		Ziebis	35	Vertebrates 3	34
F	Nov 22	Quiz 12	Ziebis	36	Vertebrates 4	34
M	Nov 25		Ziebis		EXAM 3	
W	Nov 27				THANKSGIVING HOLIDAY – NO CLASS	
F	Nov 29				THANKSGIVING HOLIDAY – NO CLASS	
M	Dec 02		Ziebis	37	Our Global Environment	52-56
W	Dec 04		Ziebis	38	Ecology and Biosphere 1	52-56
F	Dec 06		Ziebis	39	Ecology and Biosphere 2	52-56
M	Dec 16		FINAL		11 am -1 pm for the 9 A.M. lecture section 8-10 am for the 10 A.M. lecture section	

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

Course Policies

Policy on Re-grading Examinations

If you feel that an error was made in the grading of an examination, 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 examination 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 or Quizzes

No make-up examinations (or quizzes) will be given in this course. You may be excused from an exam only in the event of a documented illness or emergency. No other excuses for missing exams will be accepted. Students who wish to miss an examination 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>.

If you miss an exam or quiz due to medical illness you must present a valid medical excuse to the Lab Manager **within 72h** of the missed examination or quiz. The excuse cannot be to attend a dental appointment, a conference, or other similar reasons. The reason for missing an examination or quiz 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 Lab Manager in writing that you were seen by a physician, making sure that you include: 1) the physician'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. Note that neither you nor the physician need tell us the nature of your illness. We will contact the physician and decide whether or not you have a valid excuse. If the excuse is valid, your grade for that examination will be pro-rated based on the average of your other comparable examinations and the class average for that particular test. **An invalid excuse, or the excuse turned in late, will result in a score of zero for the examination missed.**

If you miss the **final examination** and have provided a valid medical excuse to the Lab Manager (ZHS 362) **within 72 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.

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 September 6, 2013. 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, translator, 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

The instructors in this course strongly support the ethics of academic integrity. 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 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, grade postings and general discussions. Lecture quizzes will also be completed on Blackboard.

Changes in Lab or Lecture Section

During the first three weeks of class you are responsible for changing your laboratory sections by dropping your current section and adding your new choice through OASIS. You can switch into a new lab section only if it is open (if it has less than 20 students). If a lab section is currently closed you must wait until other students drop before you can switch into that section. No changes are allowed after the first three weeks of class (i.e., after two weeks of lab). You are responsible for printing out your grade report from Blackboard **before** changing sections, as scores may be irrevocably lost from the Blackboard system when students change sections. The same applies if changing lecture sections.

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.

FALL 2013 BISC 120Lg INSTRUCTIONAL TEAM

For ANY administrative questions about ANY aspects of the lecture and laboratory portions of this course, please FIRST CONTACT the Administrative Teaching Assistant, Yukai Zhao (E-mail: yukaizha@usc.edu)

MWF instructors: **Dr. Suzanne Edmands**
 Dr. Cornelius Sullivan
 Dr. Wiebke Ziebis

TH instructors: Dr. John Heidelberg
 Dr. Karla Heidelberg

Lab Manager: Gorjana Bezmalinovic

Teaching Assistants (TAs): TBA

Supplemental instruction (SI) leaders:	TBA	(Attending MWF lecture)
	TBA	(Attending MWF lecture)
	TBA	(Attending TH lecture)
	TBA	(Attending TH lecture)

SI study session times can be found at <http://dornsife.usc.edu/supplemental-instruction> once the semester starts.

Answers to students' frequently asked questions regarding this course can be found on Blackboard (<https://blackboard.usc.edu>) under Course Information in your lecture section.

BISC 120Lg LABORATORY SYLLABUS**FALL 2013**

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

E-mail: bezmalin@usc.edu

Office hours: Open door policy

Laboratory Schedule:

<u>Lab #</u>	<u>Date</u>	<u>Laboratory</u>	<u>Lab Manual</u>
	Aug 27 – Aug 30	NO LAB THIS WEEK	
1	Sep 3 – Sep 6	Introduction to BISC 120 labs Laboratory Safety and Skills	Chapter 1 & Appxs. A, B
2	Sep 10 – Sep 13	The Microscope	Chapter 2 & Appx. C
3	Sep 17 – Sep 20	Evolution (Start the Petri plates!)	Chapter 3
4	Sep 24 – Sep 27	Bacteria*	Chapter 4
5	Oct 1 – Oct 4	Protists	Chapter 5
	Oct 8 – Oct 11	LAB EXAM 1 (Antibiotics lab report due)	(Chapters 1, 2, 3, 4, & 5)
6	Oct 15 – Oct 18	Plant Diversity I	Chapter 7
7	Oct 22 – Oct 25	Plant Diversity II (Cut the planarians!)	Chapter 8
8	Oct 29 – Nov 1	Animal Diversity I: Invertebrates*	Chapter 9a
9	Nov 5 – Nov 8	Animal Diversity II: Echinoderms and Chordates	Chapter 9b
10	Nov 12 – Nov 15	Ecological Relationships (Planaria Regeneration lab report due)	Chapter 10
	Nov 19 – Nov 22	LAB EXAM 2 (Lab manuals due!)	(Chapters 7, 8, 9 & 10)

	Nov 26 – Nov 29	NO LAB – THANKSGIVING
11	Dec 3 – Dec 6	Biodiversity Conservation Presentations

*Exercise for which 5-7 pages, type-written lab report is required.

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

Required Textbooks available at the USC bookstore:

[General Biology Laboratory Manual FALL 2013, BISC 120 & BISC 121 Courses, USC](#). (Available at the USC bookstore after August 25, 2013.)

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 ([300 points](#)) will count for 30% of your final course grade, distributed as follows:

Lab Quizzes (10 – 5 points each)	50 pts
Lab Manual (10 – 5 points each)	50 pts
Lab Reports (2 – 35 points each)	70 pts
Lab Exams (2 – 50 points each)	100 pts
Biodiversity and Conservation Biology Presentation	30 pts

LABORATORY PERFORMANCE GUIDELINES

1. You are required to attend all lab sessions. Any unexcused absences will seriously affect your evaluation. Come to lab on time. You are also to remain for the entire lab session or until excused by your instructor. Don't make other appointments for the time you are scheduled to be in lab.

Students who are within 10 points of a grade borderline at the end of the semester will be considered for an upgrade based on the following criteria: class participation, attendance, coming to office hours, and subjective evaluation by the TA, Lab Manager, and faculty.

2. 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.

3. 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 5 questions, 3 will test you on the knowledge of the material you will be covering that day in lab, and the other 2 will test you on the results from the previous lab.
4. LAB WRITE-UPS: 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 a signature. Lab manuals will be collected for grading at the end of the semester.
5. 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.
6. 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 – 5, while labs 6 – 10 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 practical exam due to a serious illness, you must present a valid excuse to the Lab Manager within 48 hours of the missed exam. A valid excuse is considered to be a statement that you were seen by a physician, the physician's name and phone number, and authorization for us to discuss with the physician whether you were too ill to take the exam, which we will do. Note that neither you nor the physician need tell us the nature of your illness. If you have a valid excuse, 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.

7. MISSED LABS: If you miss a scheduled lab exercise due to illness or emergency, please contact immediately the Administrative TA Yukai Zhao at yukaizha@usc.edu to see whether it will be possible to make up the exercise by attending an alternative lab section. Please tell him what lab section you are in, who your TA is, and when you would like to make up the missed lab (days and times that would work best for you). 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. Thus, it is very important for you to attend your scheduled lab section.

Please note that no lab switching will be allowed during the week prior to a holiday. Athletes who must miss occasional labs for legitimate reasons should bring documentation to the Lab Manager well in advance, at least 2 weeks, to arrange alternatives. 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 at least 2 weeks in advance of the absence. If the absence is approved, a reasonable accommodation will be determined.

8. BIODIVERSITY CONSERVATION PRESENTATION: Detailed instructions for preparing your presentation, including how points will be assigned, will be provided on Blackboard (<https://blackboard.usc.edu/>).

POSTING GRADES: You can find your lecture and lab grades on Blackboard: <https://blackboard.usc.edu>. Lecture exam scores are posted under **LECTURE SECTION**. All lab grades are posted under your **LAB SECTION**. Be sure to check for additional postings on a regular basis. It is the student's responsibility to notify his/her TA or Lab Manager ASAP in the event of any mistakes, so please check your scores on Blackboard weekly.

LABORATORY SCORE NORMALIZATION: The laboratory scores will be normalized at the end of the semester by the Lab Manager to correct for differences in grading between TAs. In this procedure, the mean total score of all students in each TAs labs is compared to the mean total score of the entire class and each student's score is adjusted.

STUDENTS WITH DISABILITIES: Students requesting academic accommodations based on a disability are required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP when adequate documentation is filed. **The letter needs to be delivered to the Lab Manager** as early in the semester as possible, preferably **by Sep 6, 2013**. For more information, you can visit the DSP office in STU 301 (8:30-5:00, M-F), call at 213-740-0776, email at ability@usc.edu, or go to their website: http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html.