
EVOLUTIONARY BIOLOGY (BI325) – Dr. LORI LAPLANTE

SPRING 2018

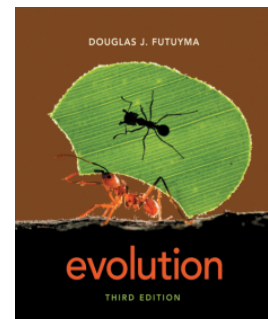
Office: Goulet 2317; Research Lab: Goulet 1305
Office hours: Mondays 1:00 – 4:00 PM
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COURSE MEETING TIMES:

Lecture: T/TH 10:00 – 11:15 AM, Goulet 3100
Lab: T 1:30 – 4:20, Goulet 1328

REQUIRED TEXT/MATERIALS:

- Evolution. Douglas J. Futuyma. 3rd ed. Sinauer Associates, Inc. 2015.
Link to companion website: <https://evolution4e.sinauer.com/>



SAKAI will be used extensively to post announcements, lecture notes, reading assignments, and grades. If you have any problems accessing the course page from Sakai please let me know immediately.

EVALUATION: Your final grade in BI325 will be based on a total of 500 points (see explanations of each assessment type **below**). ***Note: Grades determined only by points earned on items listed in the Evaluation section. There is no opportunity other than what is explicitly stated in this syllabus to earn points. In other words, there will be no special assignments or additional work beyond that assigned to all students.*

2 Lecture Exams ^a	200
Weekly Journal ^b	30
Laboratory Reports ^c	60
Op-Ed ^d	40
Op-Ed Presentation ^e	20
Final Exam ^f	150
TOTAL	500

<u>Grade</u>	<u>%</u>	<u>Grade</u>	<u>%</u>
A	>93	C	74-76
A-	90-93	C-	70-73
B+	87-89	D+	67-69
B	84-86	D	64-66
B-	80-83	D-	60-63
C+	77-79	E	<60

^a **Lecture exams** cover material presented in lecture, readings, discussions, and problem sets. The format of the exams may include any of the following: multiple choice, matching, true/false, fill-in-the-blank, short answer and/or short essay questions. *A make-up exam will only be scheduled if you provide evidence of an excused absence.*

^b **Weekly Journal:** You will be expected to write in your online journal weekly. Each Monday I will post a news article highlighting current advances in the field of evolution. Each journal entry should be 1-2 paragraphs and include i) a summary of the article's main message, ii) a few sentences on how the article expanded your understanding of the topic as discussed or learned in class, and iii) a paragraph reflecting your reaction to and understanding of the topic as covered in the news article (see guiding questions on 'Journaling Instruction' sheet). Full credit will be given to students who have written meaningful and critical reflections every week. Instructions for submitting journal entries are found in the Resources section of Sakai.

^c **Laboratory Reports:** Evaluation of laboratory reports can include pre-lab questions, worksheets, data analysis, and interpretive questions.

- Pre-lab assignments are due at the beginning of the lab period prior to taking the quiz.
- Worksheets, analyses, and interpretive questions are due IN LAB the week after the lab is completed (see lab schedule).
- Please note that while work in groups during lab and thus share data and discuss results in your group, your worksheet and other parts of the lab assignment must be your own work.

^d **Op-Ed Piece:** You will be writing an op-ed article in response to one of the controversial topics in evolution. To emphasize the iterative process required to produce a well-written op-ed, you will be graded both on your initial submission (25 pts) and on one revision (15 pts). A late penalty of 2 points per day will be deducted for each day beyond the due date. *Guidelines and rubric for the op-ed assignment will be provided in advance.*

^e **Op-Ed Presentation:** You will give a 10-minute presentation (\pm 1 min) on your op-ed topic. You may read your op-ed, but because you are presenting to a live audience some visual aids (e.g. Powerpoint, handouts, videos, etc.) are required. A rubric will be provided in advance listing areas for which you will be evaluated. Presentations are held in front of an audience, therefore there is no option to make-up the assignment.

^f **Final Exam:** The final is cumulative and may include any of the following: multiple choice, matching, true/false, fill-in-the-blank, short answer and/or short essay questions. See schedule below for date and time of final exam. *A make-up exam will only be administered if you provide a written excuse from the Dean.*

ATTENDANCE POLICY:

Attendance at lecture is mandatory and excessive absences will affect your final grade. You may accumulate class absences amounting to the number of class meetings per week, which for this course is **3** absences. These “allowed absences” should be used for reasons necessitated by circumstances such as a brief illness, a personal obligation that conflicts with a class, or participation in College-sponsored events. Absences beyond these “allowed absences” will have a negative impact on your grade. If you exceed this number your course grade will be reduced by 5% for each additional absence. For example, a student that has an 84%, or ‘B’, at the end of the course but has 4 unexcused absences will have his/her grade adjusted down to 79%, a ‘C+’, as the final course grade. Keep in mind that work missed resulting from any unexcused absence may not be made up!

- If you know you will be missing a class in advance, please contact me so that a make-up option may be arranged.
- Make-up quizzes and exams will be permitted only with a note from the Dean.
- Please refer to the Student Handbook for additional policies regarding attendance.
- Student athletes will occasionally have conflicts between games and lectures in this course. It is your responsibility to meet with me before the scheduling conflict so that appropriate arrangements can be made.

ACADEMIC HONESTY:

It is imperative you review the section on Academic Honesty in your Student Handbook, and review your copy of *Doing Honest Work in College* (from Freshman year), where there are clear explanations of what is considered cheating and plagiarism. Remember, it is *your responsibility* to understand these! Incidents of cheating or plagiarism will be reported to the Dean of Students – no exceptions! In addition, depending on the severity of the infraction, cases of cheating or plagiarism may result in a failing grade for the assignment or exam in question, a failing grade in the course, or expulsion.

ELECTRONIC DEVICES:

In order to avoid disruption to the class, the use of cell phones, smart tablets, PDAs, or similar communication devices are prohibited during scheduled classes. Text messaging or accessing information on these devices is

likewise forbidden. All such devices must be put in a silent (vibrate) mode and ordinarily should not be taken out during class. Given the fact that these same communication devices are an integral part of the College's emergency notification system, an exception to this policy would occur when numerous devices activate simultaneously. When this occurs, students may consult their devices to determine if a college emergency exists. If that is not the case, the devices should be immediately put away.

A NOTE ABOUT CREDIT HOURS

According to the College Catalogue, "one credit hour shall reasonably approximate not less than three hours of engaged student learning per week throughout the duration of the term." Thus, the expectations for this 4-credit lecture/laboratory course is **3 hours of lecture in class plus 9 hours of combined laboratory time and out-of-class work per week**. The "out-of-class" work includes reading assigned text, preparation for labs, writing assignments, reviewing course material, preparation for exams, and any group work assigned during this course. The course content, assignments, and expectations were designed with this time commitment in mind.

ACADEMIC RESOURCE CENTER

Peer tutoring and writing support are available at The Academic Resource Center (ARC) free of charge. You are encouraged to take full advantage of the resources available to you through the ARC. Hours of operation are posted online (<http://www.anselm.edu/Current-Students/Academic-Resources/Academic-Resource-Center.htm>) or call the Academic Resource Center at 641-7017.

WRITTEN COMMUNICATION OUTCOME:

This course is designated as a writing intensive course. The college's goals and objectives and student learning outcomes for written communication appear below:

Goals and Objectives

Written communication is defined as the ability to express facts and ideas correctly and persuasively in writing. Competent writers communicate clear, concise messages to their intended audiences, using appropriate, discipline-specific writing conventions. Courses should develop students' ability to construct complex and logical arguments that make effective use of relevant supporting materials and produce focused, coherent written work. Courses should promote the importance of writing as a tool of analysis and communication.

Student Learning Outcomes

Students who have completed their studies at Saint Anselm College should be able to:

- Demonstrate a command of standard grammar, spelling, and punctuation
- Develop an effective writing process of planning, writing, reflecting, and revising
- Write well-organized papers that make effective and discipline-specific use of credible evidence in support of clear theses that acknowledge complexity and alternative views
- Employ rhetorical strategies suited to the purpose(s) and audience(s) for the writing, to include appropriate vocabulary, voice, tone, and level of formality
- Cite and document sources effectively and meet readers' expectations about genre and document design

ADA/504 COMPLIANCE STATEMENT:

Saint Anselm College is committed to meeting the needs of students with documented physical, sensory, psychiatric, and learning disabilities. To disclose a disability and request academic accommodations, please see Kenneth Walker in the Academic Resource Center (ARC) in Lower Cushing, who will assist you in making contact with appropriate faculty members and arranging support services and accommodations available within the ARC and elsewhere. To ensure that accommodations are arranged in a timely manner, you are encouraged to make your request at the beginning of each semester.

LECTURE & LABORATORY SCHEDULES (subject to change)

Week	Date	Lecture Topic	Ch	Laboratory Topic
1	T Jan 16	Evolutionary Biology	1	No Lab
	Th Jan 18	Tree of Life	2	
2	T Jan 23	Tree of Life	2	Constructing a Phylogenetic Tree
	Th Jan 25	Tree of Life / Patterns of Evolution	2,3	
3	T Jan 30	Patterns of Evolution / Fossil Record	3,4	Applied Phylogenetics (Meet in Weiler PC Room)
	Th Feb 1	Fossil Record	4	
4	T Feb 6	Fossil Record / History of Life	4,5	Fossils
	Th Feb 8	History of Life	5	
5	T Feb 13	Biogeography	6	Writing Persuasive Arguments: The Op-ed/ Lizard Evolution <i>*Bring Headphones*</i>
	Th Feb 15	Biogeography	6	
6	T Feb 20	Exam #1		Saturday Lab (Time TBD): Harvard Natural History Museum (Boston)
	Th Feb 22	Genetic Variation	8	
7	T Feb 27	Genetic Variation	8	Human Feet and the Laetoli Trackway
	Th Mar 1	Variation	9	
8	<i>No classes: Enjoy Spring Break!</i>			
9	T Mar 13	Genetic Drift	10	Molecular Phylogeny and Systematics
	Th Mar 15	Genetic Drift / Natural Selection Due: Op-eds	12	
10	T Mar 20	Natural Selection		Evolution of Trichromatic Vision <i>*Bring laptop with Genieous software and downloaded files*</i>
	Th Mar 22	Natural Selection	12	
11	T Mar 27	Evolution and Human Health		Plant and Animal Adaptations
	Th Mar 29	**No class Happy Easter**		
12	T Apr 3	Evolution and Human Health		Antibiotic Resistance, Part 1
	Th Apr 5	Evolution and Human Health Lab: Antibiotic Resistance, Part 2		
13	T Apr 10	Exam #2		1) Antibiotic Resistance, Part 3 2) How to give a persuasive presentation
	Th Apr 12	Sex and Reproductive Success	15	

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14	T Apr 17	Sex and Reproductive Success All Op-ed Revisions Due	15	Antibiotic Resistance, Part 4
	Th Apr 19	Species and Speciation	15	
15	T Apr 24	Evolution, Creationism, Society	17, 18	Op-Ed Presentations
	Th Apr 26	Evolution, Creationism, Society	23	
16	T May 1	Evolution, Creationism, Society	23	Op-Ed Presentations

****FINAL EXAM: WEDNESDAY, MAY 9 AT 9:00 AM ****