

**BIEB 154: Evolutionary Inquiry**  
**Spring 2018: TTh 3:30-4:50 PM, York Hall 4080A**

**Professor contact information:**

Dr. Sarah Stockwell (sarahs@ucsd.edu)  
Office: H&SS 1310  
Office hours: Mondays 1:30-2:30 PM

**Graduate IA contact information:**

Alex Neu (aneu@ucsd.edu)  
Office hours: Thursdays 12-1 PM at the Mandeville coffee cart (Art of Espresso)

The best way to contact us is via email. In all emails, please put “Evolutionary Inquiry” in the subject line.

**Course websites:**

**Check here often** for reading assignments to complete before classes and discussion sections, lecture slides to download after class, etc.:  
triton.education.ucsd.edu (click on the BIEB 154 link).  
Video podcast: podcast.ucsd.edu

**Required materials**

- You will need a copy of The Beak of the Finch by Jonathan Weiner. All other readings will be posted as PDFs on the class TritonEd website or otherwise made freely available to you.
- You will need an iClicker. iClickers are available for purchase at the UCSD bookstore or online. A used one is fine. You do not need to pay to register it anywhere. You do need to register it (for free) on the class TritonEd site.

**Course description:**

We will spend two weeks on each of five important questions in the field of evolutionary biology. The topics will range across much of modern evolutionary biology, but this class is not intended as a survey. Instead, we will take the time to delve deeply into a small number of topics through reading, writing, and discussion.

This course is different in format from other science classes you have probably taken. There is no textbook. Instead, we will read extensively from two kinds of literature. For each of the five Big Questions, we will read ~100 pages on the topic from books written for a general audience about evolutionary biology to provide background and context. We will then use this knowledge to help tackle a primary literature article on the question, which you will be expected to discuss in detail. By the end of the class, you should have improved your skills at reading primary literature and deepened your understanding of five major areas of inquiry in evolutionary biology.

There will be a midterm and final exam for the class, covering the content we have studied. In addition, you will be expected to complete a number of short writing assignments in which you respond to, summarize, or interpret what you have read.

The course has three goals:

- To give you a deep understanding of a selection of important questions in evolutionary biology;
- To give you practice with reading and creating accurate, engaging science writing. Such writing serves both to clarify your own thinking and to improve your ability to communicate science to others;
- To improve your ability to read primary literature in the field.

The questions we will investigate this quarter:

- 1) How powerful is natural selection?
- 2) How repeatable is evolution?
- 3) Where do new traits come from?
- 4) How does human evolutionary history affect us today?
- 5) How do humans affect the evolution of other species?

### **Writing Hub**

We will be doing a lot of writing in this class. I strongly recommend the Writing Hub as a free and convenient resource to help you improve your writing. Information about the Writing Hub:

**The Writing Hub** -- Need help with a writing project? Want to talk through your ideas or get a second opinion on whether your writing is clear, logical, and well-supported? **The Writing + Critical Expression Hub (“Writing Hub”)** can help!

Located in the Geisel Library, the Writing Hub offers UC San Diego students free one-on-one help with any writing project—from cover letters to lab reports, research papers to grant proposals. Visit the Writing Hub to meet with a supportive, well-trained peer writing mentor who will help you gain perspective on what works and what can be improved in your writing.

**The Writing + Critical Expression Hub** | [writinghub.ucsd.edu](http://writinghub.ucsd.edu) | [writinghub@ucsd.edu](mailto:writinghub@ucsd.edu)

**What?** Free help for all UCSD writers—any writing project, every stage of the process

**Where?** Geisel Library, lower level west (part of the Teaching + Learning Commons)

**When?** Sunday-Friday, including evenings; see [WritingHub.ucsd.edu](http://WritingHub.ucsd.edu) for hours

**How?** Book appointments at <https://ucsd.mywconline.com>. Same-day appointments and drop-in hours also available.

You don't have to bring a finished draft; for example, you can bring your notes and ideas and get help with organizing your paper. To encourage you to go, **I will offer 2 extra credit points** to each student who goes to an appointment with one of the peer writing mentors to work on writing for this class by May 2 (the due date for the first 2-page paper).

### **Reading journal:**

Reflecting on what you have read is an important part of understanding it and integrating it into your knowledge of biology. To help you with this, you will be expected to maintain a reading journal throughout the quarter. This should be a **paper notebook** that is dedicated to this class's readings and **physically separate** from whatever you take notes on in class. A composition notebook is fine. You can use a notebook that is already partially used, as long as there are at least 75 blank pages left in it. Don't use it for anything else this quarter because all the entries should be contiguous.

For each lecture and discussion section in which reading is assigned, you should make a new page in your reading journal. Write the date clearly at the top of the page. On that page, make a separate entry **for each reading assignment** (you may have multiple entries for each day):

- Write the source and pages of the assignment (e.g., “Beak of the Finch, pp. 3-6”).
- Write a summary of the main idea(s) of each reading in 1-2 complete sentences. The summary should be entirely in your own words. Do not quote phrases from the reading. You are welcome to consult outside sources or people to help you understand the reading, but do not use their language or ideas to write your summary. It should reflect your own understanding of the reading.

Bring the reading notebook to each class. We will occasionally collect them for grading during class, and these will be unannounced. The entry for each reading assignment will be graded on this scale:

0: No entry for this reading assignment

1: Summary exists but is clearly incomplete, is not in your own words, exceeds the 1-2 sentence limit, gets the science substantially wrong, or is not understandable.

2: Summary accurately captures the essential points of the reading and communicates them in a clear, coherent way.

Exception: on days when the reading assignment is a scientific paper, don't write summaries. Instead, work through the questions in the “How to read and understand a scientific article” guide that you will be given in the first week. For each question, think through your answer and make notes on it. These don't have to be in complete sentences like the summaries, but you should have enough detail written down that you can provide an answer to that question if asked in class. We won't collect reading journals for grading on days when we discuss scientific papers, so you will have your journal with you in class for the discussion.

### **Grading:**

20 points:	Reading journal (occasional surprise checks throughout the quarter)
45 points:	Papers (5 points for short summary paper; 10 points for each 2-page paper)
20 points:	Participation in and preparedness for class discussions and activities
10 points:	In-class written assignments (occasionally collected)
30 points:	Discussion sections (for each section: 1 point for attending, 2 points for participating and coming prepared)
5 points:	Clickers (graded on participation; see details below)
25 points:	Midterm
45 points:	Final exam
Total:	200 points

Your final letter grade will be based on your total number of points. If you get over 90% of the points you will receive an A, over 80% you will receive at least a B, etc. If needed to adjust the distribution of letter grades upward, grades will be based on a curve. The curve will only be used (if it is used) to move letter grade thresholds down, so it can only help your grade, not hurt it. For those taking the class pass/no pass (P/NP), the minimum final grade to receive a grade of P is a C-. The final course curve is based on the students that are enrolled in the course at the end of the quarter.

**TritonEd:**

Reading assignments: By the end of each lecture day, I will post the reading assignment for the next lecture on TritonEd. You should complete this reading assignment by the start of the next class.

Lecture slides: Research suggests that students learn best if they take independent notes, so I do not post lecture slides in advance. Lecture slides in PDF form will be available on TritonEd (<https://TritonEd.ucsd.edu>) within 24 hours after the lecture was given.

**Class participation and preparedness:**

This part of your grade will be based on the following criteria:

- Arriving to class on time
- Demonstrating that you have carefully done the assigned readings
- Participation in discussions and lectures
- Active engagement and thinking about scientific questions

**Some due dates and exams:**

Short summary paper on Beak of the Finch: April 17

2-page paper on the repeatability of evolution: May 2

Midterm (in class): May 3

2-page paper on the evolution of novel traits: May 16

2-page revision of repeatability paper: May 30

2-page revision of novel features paper: June 6

Final exam (outside class): June 11, 3-6 PM

**Clickers:**

This class will introduce you to new material and concepts. To increase the depth of your understanding and to give you practice in applying these concepts, I will provide opportunities for you to reflect on and discuss the ideas in class via clicker questions.

Your grade for clicker questions will be based on participation, not on correctness. If you answer at least 75% of the participation questions during the quarter, you will get full credit. If you answer less than 75% of the questions, your participation grade will be based on the proportion of questions you answered. For example, if you answer 70% of the questions, you will get  $(70\%)(5 \text{ points}) = 3.5 \text{ points}$ .

You will need to register your iClicker on TritonEd (under the Tools link) and bring it to each class. You cannot share a clicker with another student enrolled in this class. Clicking in for another student is an academic integrity violation and both students involved will get 0 clicker points for the quarter.

It is your responsibility to have your clicker with you at lecture and to make sure it is working properly. There will be no make-up opportunities for clicker questions, for any reason, nor can you get clicker credit for handing in questions on paper, etc. If your clicker is not working, I will NOT award points retroactively, so you MUST figure out why it's not working immediately. Like all technologies, clickers sometimes malfunction. This is why I give full clicker credit if you answer 75% of the questions or more. I do not adjust scores in other ways.

If you lose your clicker mid-quarter and use a different clicker, you need to change your registration in TritonEd and you need to email me with this information before the next lecture): a) your student ID number b) your new clicker ID.

*In order to give you time to get your clicker registered and iron out any technical problems, clicker points will not start counting toward your grade until the second week of class.*

### **Late policy:**

Assignments will be marked down 10% for each day they are late.  
There is no way to make up a missed reading journal check.

### **Regrade requests for exams:**

All regrade requests should be submitted in writing within one week of your receiving the graded exam. Only exams written in nonerasable pen are eligible for regrade requests.

**Please do NOT post my lectures or class materials on public websites** like Course Hero or others. I work hard on my class materials and do not appreciate the material being made public for anyone to see or download.

### **University Policy on Integrity of Scholarship**

Integrity of scholarship is essential for an academic community. The University expects that both faculty and students will honor this principle and in so doing protect the validity of University intellectual work. For students, this means that all academic work will be done by the individual to whom it is assigned, without unauthorized aid of any kind. Instructors, for their part, will exercise care in planning and supervising academic work, so that honest effort will be upheld.

#### **Student Responsibility:**

Students are expected to complete the course in compliance with the instructor's standards. No student shall engage in an activity that involves attempting to receive a grade by means other than honest effort; for example:

- No student shall knowingly procure, provide, or accept any unauthorized material that contains questions or answers to any examination or assignment that is being, or will be, administered.
- No student shall complete, in part or in total, any examination or assignment for another person.
- No student shall knowingly allow any examination or assignment to be completed, in part or in whole, for himself or herself by another person.
- No student shall plagiarize or copy the work of another person and submit it as his or her own work.
- No student shall employ aids excluded by the instructor in undertaking course work or in completing any exam or assignment.
- No student shall alter graded class assignments or examinations and then resubmit them for regrading.
- No student shall submit substantially the same material in more than one course without prior authorization.

### **Special accommodations**

Students requesting accommodations and services due to a disability for this course need to provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD), prior to eligibility for requests. Receipt of AFAs in advance is necessary for appropriate planning for the provision of reasonable accommodations. OSD Academic Liaisons also need to receive current AFAs. For more information, contact the OSD at (858) 534.4382 (V); (858) 534-9709 (TTY); [osd@ucsd.edu](mailto:osd@ucsd.edu), or <http://osd.ucsd.edu>. **You will need to coordinate scheduling of exams with me. All of these arrangements should be made within the first two weeks of the quarter.**