COURSE SYLLABUS

DARWIN TO DNA: AN OVERVIEW OF EVOLUTION (SCNC1-UC3218-001), 4 CREDITS

SPRING 2019, 01/28/19 - 05/13/19, MONDAY 6:20-8:50PM, 24 WAVERLY PLACE, ROOM 369

PROFESSOR
Mercer R. Brugler, Ph.D.
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Cell Phone: 337-212-3661 (call or text)
Website: https://mbrugler.wixsite.com/blackcoral

OFFICE HOURS
Office hours are by appointment only. Please contact your professor by email first with any questions or concerns. If necessary, your professor will schedule a time to talk via phone, Skype (mercer_r_brugler), or Google Hangouts (mercerrbrugler@gmail.com).

COURSE DESCRIPTION
This course leads students on a broad exploration of evolutionary science. Students review the history of evolutionary thought and science; genetics; the main mechanisms and forces that drive evolution; and the tools and findings of evolutionary research, including the evolution of humans and human behavior.

What were Darwin’s findings? Are his findings still relevant today? How could he have come up with the idea of ‘evolution through natural selection’ if he did not know about DNA or how heredity works? And how does heredity work? Now that we have decoded the human genome, what do we know – and still don’t know – about ourselves?

COURSE PREREQUISITES
None.

COURSE STRUCTURE
The course delivery format is in-person at 24 Waverly Place, Room 369. Students are expected to check their NYU email account and NYU Classes daily for course assignments and/or other course-related correspondence. Class will not be held on February 18 due to Presidents’ Day and March 18 due to Spring Recess.

COURSE LEARNING OUTCOMES
By the end of this course, students will be able to:

● Describe what science is (including its limitations) and how it applies to evolutionary biology
● Explain how DNA is structured and how heredity works, in simple terms
● Describe all of the mechanisms by which evolution acts and a real-life example of each
● Define natural selection in your own words, and apply that definition to explain the evolution of a particular trait or behavior
● Outline the main events and questions in human evolution
● Use critical thinking and the best available information to frame and investigate a question related to evolution and its significance to us today

Over the course of the semester, students will also develop the following skills that are important in both science and professional life: active and critical reading, written communication skills, project management and coordination, synthesis of information, collaboration with peers, and peer evaluation.

COMMUNICATION POLICY
Students must use their NYU email account (or NYU Classes course-mail) to communicate with the professor. The professor will make every effort to respond to all email inquiries within 24 hours.
**REQUIRED COURSE TEXTBOOK**


**REQUIRED SUPPLEMENTAL READING**


**EVOLUTIONARY BIOLOGY-RELATED FILMS**

We will spend ~20 minutes of every class viewing an evolutionary biology-related film that is directly related to the material being presented in *The Tangled Bank, Remarkable Creatures, and/or Into the Jungle*. The films that have been chosen are as follows...

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**EVOLUTION - A 7-SHOW MINISERIES (PREMIERED 09/24/2001 ON PBS)**

Evolution determines who lives, dies, and passes traits on to the next generation. The process plays a critical role in our daily lives, yet it is one of the most overlooked, and misunderstood, concepts ever described. This miniseries travels the world to examine evolutionary science and the profound effect it has had on society and culture. See [http://www.pbs.org/wgbh/evolution/about/overview_series.html](http://www.pbs.org/wgbh/evolution/about/overview_series.html).

**YOUR INNER FISH – A 3-PART SERIES BY NEIL SHUBIN (PREMIERED 04/09/2014 ON PBS)**

Have you ever wondered why the human body looks the way it does? Why our hands have five fingers instead of six? Why we walk on two legs instead of four? It took more than 350 million years for the human body to take shape. How did it become the complicated, quirky, amazing machine it is today? *Your Inner Fish* delves into the past to answer these questions and reveals that hidden within the human body is a story of life on Earth. See [http://www.pbs.org/your-inner-fish/about/overview/](http://www.pbs.org/your-inner-fish/about/overview/).

**THE AMERICAN MUSEUM OF NATURAL HISTORY (CENTRAL PARK WEST AT 79TH STREET)**

Your professor will be offering an optional field trip to the American Museum of Natural History that will take place outside of the regularly scheduled class time. We will explore several public spaces (e.g., Hall of Biodiversity, Hall of Vertebrate Origins, Hall of Human Origins, etc.) before moving behind-the-scenes to meet the curators and view the collections. The date and time of this optional field trip will be determined based on student availability. See [www.amnh.org](http://www.amnh.org) for more information.

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**RADIOLAB**

Radiolab, WNYC’s Peabody Award-winning program about big ideas, is hosted by Jad Abumrad and Robert Krulwich and produced by WNYC Studios. One of the first podcasts that you will listen to is entitled *Antibodies Part 1: CRISPR* (length: 32:17; [www.radiolab.org/story/antibodies-part-1-crispr/](http://www.radiolab.org/story/antibodies-part-1-crispr/)).

CRISPR is a method of genetic manipulation that is rewriting the way we change DNA. Scientists say they will someday be able to use CRISPR to fight cancer and maybe even bring animals back from the dead. You can satisfy your weekly Forum post by commenting on a Radiolab podcast.
COURSE EXPECTATIONS

FORUM POSTS
Using the Forum tool on NYU Classes, you will be expected to either 1) post questions about the weekly readings, 2) respond to a question posted about the readings, 3) post a link to a current event and briefly state its relevance, or 4) respond to a current event, article, or podcast posted by your professor. Simply copying and pasting sentences from a current event article is not acceptable. Quality of participation, including facilitating and carefully considering the contributions of others, is as important as quantity. You must submit your weekly Forum post prior to class (i.e., by 6:20pm). Late posts will not be accepted. You can still post to the Forum even if you are absent from class (however, the deadline is still 6:20pm). Please include your name, the date, and the time that you uploaded your post.

NYC SNAPSHOT VIDEO
You will be responsible for taking a selfie of yourself (i.e., you must be in the photo / video) with anything in NYC that you can link with evolutionary biology and creating a 3-minute video presentation (the presentation does not have to take place in front of the object of interest). For example, you can take a selfie with the statue of Alexander von Humboldt in Central Park (https://www.nycgovparks.org/parkscentral-parkmonuments1637) and discuss his contributions to our understanding of evolution. You can take a selfie with an American Flag at the AMNH (http://tumblr.amnh.org/post/90753779248/happy-independence-day-this-flag-which-hangs-on) that Roy Chapman Andrews brought to the Gobi Desert and discuss how he stumbled across the first fossilized dinosaur eggs on that expedition. You can visit the Brooklyn Botanic Garden (https://www.bbg.org/), Central Park Zoo (https://centralparkzoo.com/), NY Aquarium (https://nyaquarium.com/), or Central Park (https://www.centralpark.com/) to take a selfie with a plant or animal and discuss its evolutionary history. The possibilities are endless. If you are having a hard time deciding what to take a selfie with, you can visit The Evolution Store in Greenwich Village (https://theevolutionstore.com/). You must obtain approval from your professor prior to proceeding with your selection. A variety of video presentations from past semesters will be shared with the class. The NYC snapshot video is due on Week 14 (May 13) by 6:20pm. Please send the video directly to your professor (mercer.brugler@nyu.edu), or, if the file is too large, upload it to Dropbox, OneDrive, Google Drive, or similar, and share the file/folder with your professor. Late videos (i.e., 6:21pm and later) will not be accepted.

CURRENT EVENT PRESENTATION
You will be responsible for locating and presenting one evolutionary biology-related current event during the course of the semester. Oral presentations must utilize PowerPoint, Keynote, or similar software, and last 6 minutes (+ 2 minutes for questions = 8 minutes total). You will be responsible for emailing a link to the current event to your professor (mercer.brugler@nyu.edu) at least 72 hours in advance of class (i.e., by Friday evening) so your fellow students have time to review the current event prior to your presentation. Here is a list of websites to locate current events:
www.sciencedaily.com/news/plants_animals/evolution/, life.mcmaster.ca/brian/evoldir.html,
phys.org/biology-news/evolution/, http://www.iflscience.com/, www.sciencemag.org/podcasts,

PODCAST DISCUSSION
You will choose an evolutionary biology-related podcast of your choice and lead an 8-minute class discussion of the material presented in that podcast (you may discuss more than one topic). Your verbal discussion (5 minutes) should start with a detailed summary of the podcast before opening up the discussion (≤3 minutes) to the class, and also include follow-up questions and/or additional comments for your fellow classmates in an effort to keep the discussion alive. You will be responsible for emailing a link to the podcast to your professor (mercer.brugler@nyu.edu) at least 72 hours in advance of class (i.e., by Friday evening) so the professor has time to listen to the podcast prior to your discussion. Here is a list of websites to locate biology-related podcasts: http://www.sciencemag.org/podcasts, http://www.bbc.co.uk/programmes/b00smr0w/episodes/downloads, http://www.storycollider.org/podcasts/, http://www.radiolab.org/series/podcasts/, http://www.nature.com/nature/podcast/archive.html, http://www.theskepticsguide.org/podcast/sgu, https://www.theguardian.com/science/series/science.
http://www.sciencefriday.com/episodes/, http://www.scienceforthepeople.ca/episodes, http://www.abc.net.au/radionational/programs/scienceshow/. When choosing a podcast, please refrain from selecting general “science” related topics (such as “the physics of...[e.g., flight], “the science of...[e.g., happiness]”, sports medicine, athletic endurance, etc.). A detailed grading rubric is available on NYU Classes.

QUIZZES
Weekly in-class quizzes will test your understanding of material presented during the previous week. Questions will largely be based on material presented in Sean Carroll’s Remarkable Creatures; however, material presented during the current event presentation is fair game as well. In an effort to prepare you for the final exam (i.e., to show you the types of questions that will be asked as well as the level of detail that is required), quizzes will also include a few questions based on material presented in Carl Zimmer’s The Tangled Bank. Quizzes are administered promptly at the beginning of class (i.e., at 6:20pm). Quizzes must be completed in the classroom (the only exception is for students registered with the Moses Center). If you arrive after the first quiz has been handed in, you will not be allowed to take the quiz and will receive a grade of zero. Assuming you have no absences, your two lowest quiz grades will be dropped (see MAKE-UP QUIZZES below for more details).

TERM PAPER
Each student must write a 3 to 4-page term paper on one of the following topics:

Topic 1: Select a species of interest (other than humans; perhaps a species you don’t know much about, or a species that you are interested in) and write about it from an evolutionary perspective. For example: What is the classification hierarchy of your organism (Domain, Kingdom, Phylum, Class, Order, Family, Genus, Species)? What is its scientific name (Genus + Species), and what does its scientific name allude to? Where in the Tree of Life does it fit? Which species or group of species is it most closely related to (hint: that would be the next branch on the tree with which it shares a common node)? Did its relationship to any of its evolutionary relatives surprise you, and if so, in what way? Where does your organism live? How is it adapted to its environment? Does your organism form a symbiotic relationship with another organism? Do humans use this organism – or components/extracts of this organism – for the benefit of our species? Is your organism being affected by global climate change? Etc.

Topic 2: Select an evolutionary biologist and write about his/her contribution(s) to the field. Also include where this person worked, or where they are currently working. And, what is/was the impact of their contribution to the field and/or our society? Caveat: You must select an evolutionary biologist that meets one of the following criteria: is 1) female, or 2) a minority, or 3) a person with disabilities. For a definition of what is meant by minority, please see the following document (in particular, see the bottom of Page 3 – under the heading Individuals) produced by the National Science Foundation (NSF – link here).

You must obtain written approval from your professor prior to proceeding with your topic. Thus, email details related to your topic to your professor by Week 7 (March 25). An outline of your term paper is due on Week 11 (April 22). The term paper is due on Week 13 (May 6) by 6:20pm. You must submit a hard copy and a digital copy (the latter should be sent directly to mercer.brugler@nyu.edu); the digital copy will be scanned for plagiarism using TurnItIn (or similar software). Please note that your professor will not be creating a special uploader on NYU Classes – simply send a digital copy of your term paper to your professor’s NYU email address. Evaluation criteria and specifications regarding font type and size, line spacing, margins, etc. will be provided on Week 6 (March 11). Late term papers will not be accepted, and points for that assignment lost, unless special circumstances are discussed and special arrangements are agreed upon in advance of the deadline with your professor. A term paper is considered late if the digital copy is submitted any time after 6:20pm on May 6 (i.e., 6:21pm and later). Hard copies should be handed in at the very beginning of class. A detailed grading rubric is available on NYU Classes.
**FINAL EXAM**

On Week 15 (Wednesday, May 15 from 8:00-9:50pm), your professor will administer a comprehensive Final Exam based on material presented in Carl Zimmer’s *The Tangled Bank*. The exam will be a combination of fill-in-the-blank, multiple choice, true/false and short answer questions. An approximately equal number of questions will come from each chapter that is covered during the semester. No textbooks or lecture slides are allowed during the final exam. Material presented during the current event presentations on Week 14 (May 13) is fair game as well. The final exam cannot be taken early and make-ups are not allowed.

**ASSESSMENT STRATEGY**

In-class participation: 5 points (5% of the final grade)
Forum posts: 4 points (4% of the final grade)
NYC snapshot video: 4 points (4% of the final grade)
Current event presentation: 15 points (15% of the final grade)
Podcast discussion: 10 points (10% of the final grade)
Quizzes: 25 points (25% of the final grade)
Term paper: 12 points (12% of the final grade)
Final exam: 25 points (25% of the final grade)

**IN-CLASS PARTICIPATION**

All students are required to attend and actively participate in every class with short and relevant questions and comments. Classes are an opportunity to engage in interesting exchanges with your professor and peers, capitalizing on the readings and the material presented in class. This course places a high premium on sustained, high-quality participation. A penalty of up to 10 percentage points may be assessed against the final grade of a student who inappropriately disrupts or hinders class activities and discussions.

Positive qualities of participation
- You are alert and engaged, courteous and take notes
- You enter the class discussion offering substantive answers and asking thoughtful questions. Thoughtful questions show that you are prepared (e.g., non-thoughtful question: “I don't understand anything discussed in the chapter.” What is it that you don’t understand? Do you have a specific example of something that was confusing? What is your interpretation of the topic?)
- You are courteous and take notes

Factors that affect participation negatively
- You are in class, but not engaged. You tune out, check your phone, or disappear behind your laptop screen. You sleep. You have a casual conversation with your neighbor.
- You don’t make eye contact with the professor
- Your try to dominate the discussion and are dismissive
- Your questions are vague. They demonstrate you have not thought deeply about the course materials.

Attendance vs. Participation
- Attendance is a necessary condition for participation. If you miss class, arrive late or leave early, you will not receive full participation points, no matter how stellar you are in class.

If an absence is excused, or is due to religious observance, you will receive participation points for the class that is missed. If an absence is not excused, you will not receive participation points.

**ATTENDANCE POLICY**

Attendance and prompt arrival to class are mandatory. If you are absent from class, you are responsible for all material discussed in the class you missed. If you plan to miss any classes for religious observance, please let your professor know their dates before the second class meeting (Week 2, February 4). Your professor will not penalize you for these absences, but may require you to submit the homework and/or take the quiz in advance.
If you have more than two absences, your course grade will drop by one-third of a letter grade, on a progressive scale. For example, if your course grade was “B+”, with three absences, it will be dropped to a “B”. A course grade of “B+”, with four absences, will be dropped to a “B-”, etc. Late arrival to class (>20 minutes after the quiz has been completed) and early departure from class count as absences.

If you miss class for medical reasons, you are required to notify your professor of your absence and will need to produce a doctor’s note in the next class in order for the absence to be excused. There will be no exceptions to the attendance requirements.

If you have four or more absences it will be very difficult to fulfill the learning objectives of the course and it is very likely that you will fail the course.

The following count as absences:
1. Late arrival to class (>20 minutes after the quiz has been completed)
2. Leaving class early (missing more than the last 20 minutes of class)
3. Leaving class for more than 20 minutes for any purpose

EXTRA CREDIT
Extra credit is not offered in this course. In lieu of extra credit, your two lowest quiz grades are dropped.

MAKE-UP QUIZZES
There are no make-up quizzes. If you are absent and miss a quiz, that quiz will be dropped. This holds true regardless of whether the absence is excused or not. With two absences, the second missed quiz will be dropped. There are no more dropped quizzes after your second absence. Any additional absences will result in a grade of zero for each subsequent missed quiz, regardless of whether the absence is excused or not. Students are not entitled to additional dropped quizzes (based on the two lowest grades) on top of two absence-related dropped quizzes. Quizzes are dropped for absences before they are dropped for your lowest grade. The only exception to the no make-up policy is when the absence is due to religious observance for which I have been informed by the second class meeting (Week 2, February 4). In this case, a make-up quiz is administered at the next class meeting (following the class that is missed) either before (5:50-6:20pm), during (6:20pm-8:50pm), or after (8:50-9:20pm) class.

TUTORING
If you need extra academic support in certain subject areas, the Division of Applied Undergraduate Studies Tutoring Service offers complimentary, one-on-one tutoring in writing, math, accounting, economics, and statistics. Tutors act as learning partners who support your academic progress, and are available at times that fit your busy schedule. I encourage you to take advantage of our expert tutors who will help you to get started, will work through assignments with you as well as help clarify and review material covered in class. Students can sign up for tutoring appointments either by calling (212) 992-9055 or online at https://nyusps.mywconline.com/.

PLAGIARISM
Plagiarism involves borrowing or using information from other sources without proper and full credit. Students are expected to quote accurately and identify the origin of citations from others, as well as to acknowledge when ideas are dependent upon concepts developed from other sources. This process of attribution and referencing allows each individual to demonstrate how her or his understanding and ideas relate to an existing body of knowledge - and add to them. It demonstrates the values of academic integrity, and systematic reflection and intellectual development. To do otherwise and not reveal sources constitutes plagiarism. And plagiarism is a form of academic dishonesty. The following link provides additional information on plagiarism, as well as what constitutes 1) an offense of plagiarism and 2) an offense against academic integrity:

http://www.scps.nyu.edu/academic-policies-and-procedures.html#NYU_School_of_Professional_Studies_Policy_on_Academic_Integrity_and_Plagiarism

All required assignments in this course will be checked for plagiarism using Turnitin (or similar software).
Penalties for plagiarism and/or failing to maintain academic integrity range from a failing grade for a given assignment to dismissal from the university.

SCHOOL GRADING POLICIES

NYU-SPS Undergraduate
http://sps.nyu.edu/academics/academic-policies-and-procedures/undergraduate-academic-policies-and-procedures.html#Grades_and_Grade_Point_Averages

NYU-SPS DAUS GRADING SCALE

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<td>F</td>
<td>59 or below</td>
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INCOMPLETES

NYU-SPS no longer awards IF (Incomplete Fail) and IP (Incomplete Pass). There is only one ‘Incomplete’ option (!). Incompletes are rarely granted, and only under the most extenuating of circumstances. Responsibility for seeking an incomplete grade lies with the student. Incomplete grades are assigned at the discretion of the instructor, after a student has made a request to the instructor before the end of the semester. If I have approved your incomplete grade, you must fill out and email me the incomplete contract form by Monday, May 13, 2019 (last day of Spring 2019 classes) in order to receive the incomplete. The incomplete form will be shared with the DAUS Advising Office and placed in your student’s folder. The student must complete the necessary work by the date specified by the instructor and included in the incomplete contract: this date can be no later than the end of classes in the following full term (i.e., by the end of the spring term for a fall or January course; or by the end of the fall term for a spring or summer course). If the required work is not completed within one semester, the temporary grade of “I” automatically converts to “F”. Only students who complete >50% of coursework are eligible for an incomplete.

NYU-SPS POLICIES

NYU-SPS policies regarding the Family Educational Rights and Privacy Act (FERPA), Academic Integrity and Plagiarism, Students with Disabilities Statement, and Standards of Classroom Behavior among others can be found on the NYU Classes Academic Policies tab for all course sites as well as on the University and NYU-SPS websites. Every student is responsible for reading, understanding, and complying with all of these policies.

The full list of policies can be found at the web links below:

- University: http://www.nyu.edu/about/policies-guidelines-compliance.html
- NYU-SPS: http://sps.nyu.edu/academics/academic-policies-and-procedures.html

YOUR RESPONSIBILITIES AS A CLASS MEMBER

- Arrive to class on time.
- Come to class prepared. You should expect to spend a minimum of two or three hours outside of class for every hour spent in class each week studying for this course.
- Fully engaged in learning science. The classroom is not an appropriate place for checking social media, doing work for other classes, casual conversations, etc.
- Courteous, both in class and by email. Please do not use negative language to refer to yourself, anyone else, or your science questions.
- Take careful notes, both in class and when studying outside of class. I strongly recommend that you take notes by hand.
- Proactive in seeking help with the course materials by meeting with me, or emailing me your questions.
COURSE OUTLINE

WEEK 1, JANUARY 28
-Introduction to your instructor, your instructor’s research program, your classmates, and the course
-Zimmer, Chapter 1: Walking Whales: Introducing Evolution (pages 2-17)
-Carroll (Remarkable Creatures), Chapter 1: Introduction: Humboldt’s Gifts (pages 1-9)
-Show 2: Great Transformations (What underlies the incredible diversity of life on Earth? How have complex life forms evolved? The journey from water to land, the return of land mammals to the sea, and the emergence of humans all suggest that creatures past and present are members of a single tree of life; length: 55:30; https://www.youtube.com/watch?v=L5DaOlpXtmQ)

WEEK 2, FEBRUARY 4
-Zimmer, Chapter 1: Walking Whales: Introducing Evolution (pages 2-17)
-Carroll (Remarkable Creatures), Chapter 2: Reverend Darwin’s Detour (pages 17-45)
-Current event presentations and science podcast discussions
-Show 2: Great Transformations (continued)
-Quiz #1 (will include at least one question related to the syllabus)

WEEK 3, FEBRUARY 11
-Zimmer, Chapter 2: Before and After Darwin: A Brief History of Evolutionary Biology (pages 20-42)
-Carroll (Remarkable Creatures), Chapter 3: Drawing a Line between Monkeys & Kangaroos (pgs 47-59)
-Current event presentations and science podcast discussions
-Show 3: Extinction (Five mass extinctions have occurred since life began on Earth. Are humans causing the next mass extinction? And what does evolutionary theory predict for the world we will leave to our descendants?; length: 55:30; https://www.youtube.com/watch?v=LlgHoSEyFU)
-Quiz #2

FEBRUARY 18
-Presidents’ Day. No classes scheduled.

WEEK 4, FEBRUARY 25
-Zimmer, Chapter 2: Before and After Darwin: A Brief History of Evolutionary Biology (pages 20-42)
-Zimmer, Chapter 3: What the Rocks Say: How Geology and Paleontology Reveal the History of Life (pages 44-69)
-Tree of Life Web Project (http://tolweb.org/tree/learn/concepts/concepts.html). Review the following pages in the section Learn About Evolution & Phylogeny: 1) What is Phylogeny?, 2) Genetic Connections Between Organisms, and 3) Phylogeny or Classification: What is the Tree of Life about?
-Carroll (Remarkable Creatures), Chapter 4: Life Imitates Life (pages 61-71)
-Current event presentations and science podcast discussions
-Show 3: Extinction (continued)
-Quiz #3

WEEK 5, MARCH 4
-Zimmer, Chapter 3: What the Rocks Say: How Geology and Paleontology Reveal the History of Life (pages 44-69)
-Carroll (Remarkable Creatures), Chapter 5: Java Man (pages 81-99)
-Current event presentations and science podcast discussions
-Episode 1: Your Inner Fish (Connects our limbs, necks and lungs to a fish with limbs; length: 54:10; http://www.dailymotion.com/video/x228fxd_01-your-inner-fish_school)
-Quiz #4
WEEK 6, MARCH 11
-Zimmer, Chapter 3: What the Rocks Say: How Geology and Paleontology Reveal the History of Life (pages 44-69)
-Zimmer, Chapter 4: The Tree of Life: How Biologists Use Phylogeny to Reconstruct the Deep Past (pages 72-97)
-Carroll (Remarkable Creatures), Chapter 6: To the Big Bang, on Horseback (pages 101-121)
-Current event presentations and science podcast discussions
-Episode 1: Your Inner Fish (continued)
-Quiz #5
-The professor will distribute evaluation criteria and specifications for the term paper (see NYU Classes)

MARCH 18-24
-Spring Recess. No classes scheduled.

WEEK 7, MARCH 25
-Zimmer, Chapter 4: The Tree of Life: How Biologists Use Phylogeny to Reconstruct the Deep Past (pages 72-97)
-University of Utah’s Tour of Basic Genetics: http://learn.genetics.utah.edu/content/basics/
-Carroll (Remarkable Creatures), Chapter 7: Where the Dragon Laid Her Eggs (pages 123-141)
-Current event presentations and science podcast discussions
-Episode 2: Your Inner Reptile (Traces our hair, skin, teeth, jaws and sense of hearing back to reptilian ancestors; length: 54:55; http://www.dailymotion.com/video/x1qngaf_your-inner-fish-episode-2-your-inner-reptile_shortfilms)
-Quiz #6
-Must e-mail your term paper topic to the professor by this date (mercer.brugler@nyu.edu)

WEEK 8, APRIL 1
-Zimmer, Chapter 4: The Tree of Life: How Biologists Use Phylogeny to Reconstruct the Deep Past (pages 72-97)
-Zimmer, Chapter 5: Evolution’s Raw Materials (pages 100-122)
-Carroll (Remarkable Creatures), Chapter 8: The Day the Mesozoic Died (pages 143-159)
-Current event presentations and science podcast discussions
-Episode 2: Your Inner Reptile (continued)
-Quiz #7

WEEK 9, APRIL 8
-Zimmer, Chapter 5: Evolution’s Raw Materials (pages 100-122)
-Understanding Evolution: http://evolution.berkeley.edu/evolibrary/article/0_0_0/evo_14
-Carroll (Remarkable Creatures), Chapter 9: Dinosaurs of a Feather (pages 161-179)
-Current event presentations and science podcast discussions
-Show 5: Why Sex? (In evolutionary terms, sex is more important than life itself. Sex fuels evolutionary change by adding variation to the gene pool. The powerful urge to pass our genes on to the next generation has likely changed the face of human culture in ways we’re only beginning to understand; length: 55:30; https://www.youtube.com/watch?v=miiRmrZX3XM)
-Quiz #8

WEEK 10, APRIL 15
-Zimmer, Chapter 5: Evolution’s Raw Materials (pages 100-122)
-Zimmer, Chapter 6: The Ways of Change: Drift and Selection (pages 124-157)
-Carroll (Remarkable Creatures), Chapter 10: It’s a Fishapod! (pages 181-197)
-Current event presentations and science podcast discussions
-Show 5: Why Sex? (continued)
-Quiz #9
WEEK 11, APRIL 22
-Zimmer, Chapter 6: The Ways of Change: Drift and Selection (pages 124-157)
-Carroll (Remarkable Creatures), Chapter 11: Journey to the Stone Age (pages 207-235)
-Current event presentations and science podcast discussions
-Show 4: The Evolutionary Arms Race (Survival of the fittest: Raw competition? Intense Cooperation? Both are essential. Interactions between and within species are among the most powerful evolutionary forces on Earth, and understanding them may be key to our own survival; length: 55:30; https://www.youtube.com/watch?v=BBavDRLug8)
-Quiz #10
-Must e-mail an outline of your term paper to the professor by this date (mercer.brugler@nyu.edu)

WEEK 12, APRIL 29
-Zimmer, Chapter 6: The Ways of Change: Drift and Selection (pages 124-157)
-Zimmer, Chapter 10: Darwin’s First Question: The Origin of Species (pages 242-265)
-Carroll (Remarkable Creatures), Chapter 12: Clocks, Trees, and H-Bombs (pages 237-257)
-Current event presentations and science podcast discussions
-Show 4: The Evolutionary Arms Race (continued)
-Quiz #11

WEEK 13, MAY 6
-Zimmer, Chapter 10: Darwin’s First Question: The Origin of Species (pages 242-265)
-Carroll (Remarkable Creatures), Chapter 13: CSI: Neander Valley (pages 259-276)
-Current event presentations and science podcast discussions
-Episode 3: Your Inner Monkey (Tracks our hands, feet, color vision, spine and upright gait to our primate and hominid progenitors; length: 54:10; http://www.dailymotion.com/video/x1zxcbv_your-inner-fish-episode-3-your-inner-monkey_shortfilms)
-Quiz #12
-Term paper is due by the start of class (6:20pm)

WEEK 14, MAY 13
-Zimmer, Chapter 14: A New Kind of Ape (pages 360-394)
-Carroll (Into the Jungle), Chapter 7: Miss Latimer’s Extraordinary Fish (pages 132-145)
-Current event presentations and science podcast discussions
-Episode 3: Your Inner Monkey (continued)
-Quiz #13
-NYC snapshot video is due by the start of class (6:20pm)

WEEK 15, WEDNESDAY, MAY 15 FROM 8:00-9:50PM (Room TBD)
-Comprehensive Final Exam based on material presented in Carl Zimmer’s The Tangled Bank

The contents of this syllabus are subject to change. Your professor will announce all changes via email (mercer.brugler@nyu.edu) so please check your NYU email account daily for updates.