Fall 2020

BIOL 345-01: Evolution

Instructor: Dr. Benjamin Duval

Basic Course Information:

Lecture Time: Tuesdays and Thursdays, 9:05 – 10:20 am

Prerequisite: BIOL 112

Textbook: Emlen and Zimmer (2015) Evolution; Making Sense of Life (2nd edition)

https://www.amazon.com/Evolution-Making-Sense-Carl-Zimmer/dp/1936221551 (Links

Students sh ¶

Articulate and explain common misconceptions about evolution.
Understand and discuss the fundamental mechanisms of evolution.
Appreciate the time scale and diversity of life produced by evolution.
Understand the historical context of evolutionary thought as compared to modern thinking.

Course Expectations:

General: Adherence to the NM Tech Student Code of Conduct, including all policies related to Academic Dishonesty and research integrity will be enforced in this course.

policies:

http://www.nmt.edu/cat-university-policies/3441-policies-and-procedures-at-new-mexico-tech

Learning environment: Learning depends on engagement, and engagement depends on both the relationship between students and instructors and the general learning environment. I will do my part to come to class prepared with interesting material and a science-based lecture style that includes active learning techniques. I expect you to come to class prepared by completing the assigned reading and willing to participate in

Date	Lecture Topic
18-Aug	Course Introduction & What is Evolution?
20-Aug	Early Earth, Geology & Importance of Time I
25-Aug	Early Earth, Geology & Importance of Time II
27-Aug	Paper Discussion (Woese 1998)
1-Sept	Phylogeny & Classification, History of Scientific Insight
3-Sept	EXAM I
8-Sept	Background Genetics
10-Sept	Variability & Heredity
15-Sept	Variability & Heredity Overflow
17-Sept	Population Genetics & Drift
22-Sept	Populations and Selection
24-Sept	Evolution of Phenotypes
29-Sept	Natural Selection
1-Oct	Natural Selection & Fitness Landscapes
6-Oct	Overflow & Spandrels Discussion
8-Oct	EXAM II
13-Oct	Adaptation, Genes to Traits II

15-Oct	Adaptation, Genes to Traits II (*TBD)
20-Oct	Sex
22-Oct	Sexual Selection
27-Oct	Life History & Parental Care I
29-Oct	Life History & Parental Care II
3-Nov	Overflow & Red Queen Discussion
5-Nov	EXAM III
10-Nov	Speciation I
12-Nov	Speciation II
17-Nov	Macroevolution I
19_Nov	Macroevolution II
24-Nov	No Class
26-Nov	Thanksgiving
1-Dec	Evolutionary Ecological Interactions
3-Dec	Societal/Social Implications of Evolution
4 to 10-Dec	Finals week