

# Final Project Rubric

BIOL 1435

Spring 2023

## Assignment

Students will complete a final project addressing a specific question in evolutionary genetics chosen by the student with the instructor's help using simulations and/or empirical data—this means that all students must either attend office hours or schedule an appointment with the instructor prior to submitting their final project proposals. Students must submit a one-page final project proposal including citations—**due before the beginning of class on 2MAR23**—that includes: (1) the motivation for the research question; (2) the approaches used to study the research question; (3) two potential outcomes and their interpretations; and (4) the broader significance of the research. During the reading period, students will give 10 minute presentations going over the research they conducted over the semester. Lastly, at the end of the semester students will submit a two-page report including citations synthesizing their research—**due by the end of the final exam period for BIOL 1435 on 10MAY23**—which must include: (1) an introduction of the research topic; (2) methods used in the final project; (3) the results including at least one figure and one table; (4) a discussion of the results and proposed follow-up analyses; and (5) fully annotated code that can be used to replicate all results.

## Grading Rubric

### 1. Final Project Proposal - 5%

- (a) Did the student discuss the project with the instructor?
- (b) What is motivation for the research and overarching question?
- (c) What approaches will be used and how will the data be analyzed?
- (d) What are two possible outcomes and their interpretations?
- (e) What is the biological significance of this work?
- (f) Are citations included?

### 2. Final Project Presentation - 5%

- (a) Did the student clearly present the motivation and overarching question?
- (b) Did the student clearly explain the methods used and workflow?
- (c) Did the student present at least one high-quality figure?
- (d) Did the student present their findings and their interpretations?
- (e) Did the student present at least one follow-up analysis?

3. Final Project Report - 10%

- (a) Did the student synthesize relevant studies in the introduction?
- (b) Did the student describe how the data was generated, what methods were used, and how they analyzed the results?
- (c) Do the results include at least one high-quality figure and table with captions?
- (d) Did the student correctly interpret their results and suggest at least one follow-up analysis?
- (e) Is the student's code annotated such that the instructor can reproduce the results?