

BIOL 606: Statistical Knowledge Assessment

Dr. Atkins

2026-01-12

Instructions

This assessment helps me understand your statistical background. Please answer honestly—this is **not graded** and will help me tailor the course to your needs. Answer all questions to the best of your ability.

Name: _____

Email: _____

Question 1

To the best of your ability, define the following terms:

- a) Standard Error:
- b) Variance:
- c) Variability:
- d) Covariance:
- e) Central Tendency

Question 2

Provide an example of the following type of variables:

- a) Discrete:
- b) Continuous:
- c) Binary:
- d) Nominal:
- e) Ordinal:

Question 3

How are parametric and non-parametric statistics different?

Question 4

What does ANOVA stand for and how is it different than a T-test?

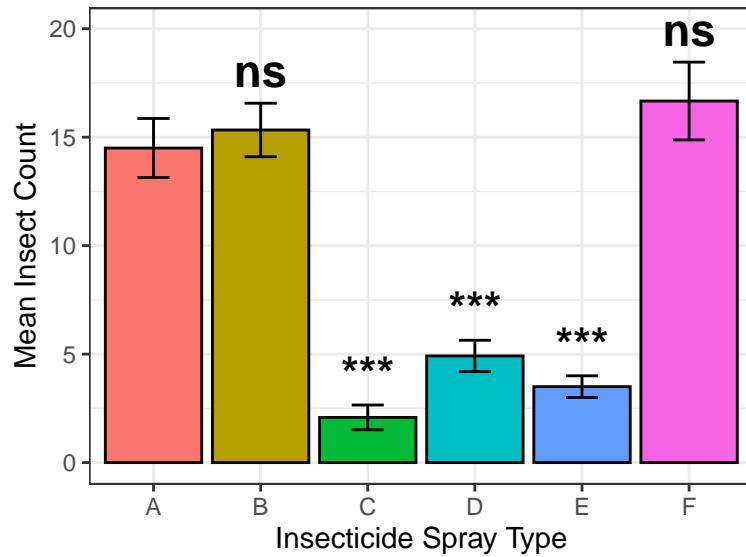
Question 5

Define the following terms:

- a) Ordination:
- b) Cluster Analysis:
- c) Psuedoreplication:
- d) Machine Learning:
- e) Heteroskedasticity:

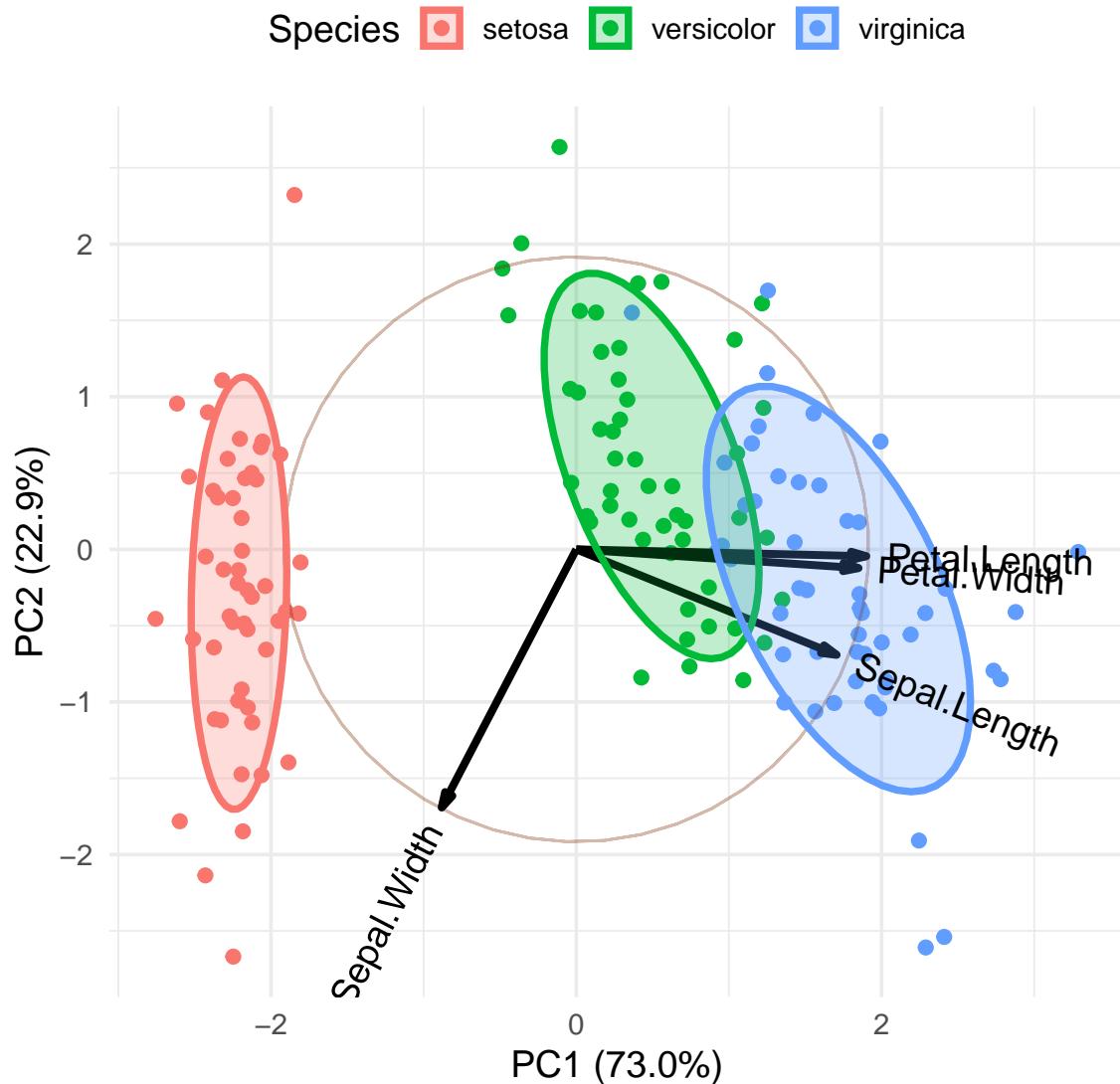
Question 6

Interpret the plot below in as much detail as possible:



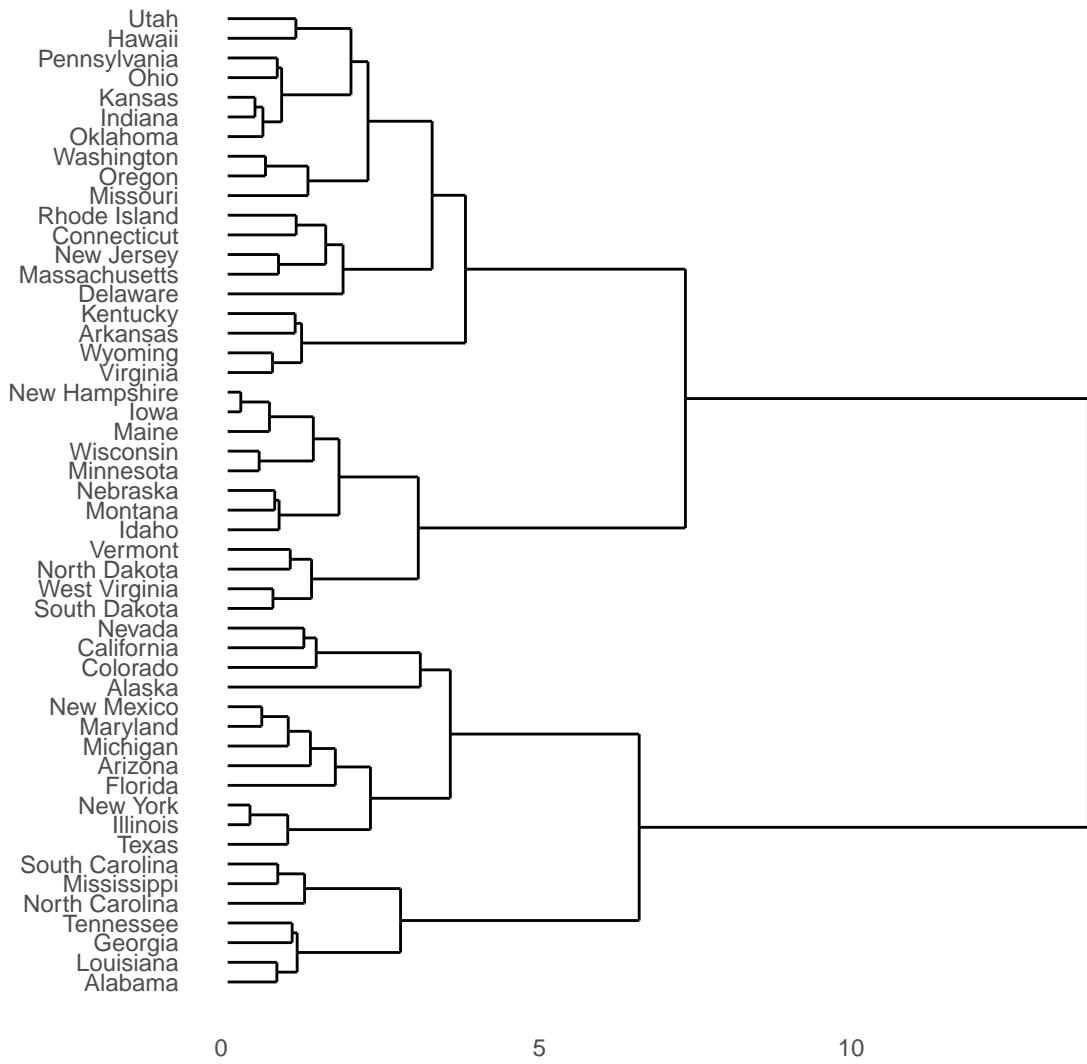
Question 7

Interpret the plot below in as much detail as possible:



Question 8

Interpret the plot below in as much detail as possible:



Question 9

What does statistical significance mean?

Question 10

Why did you take this class and what topics related to quantitative ecology are of most interest to you?

Question 11

List all of courses you have completed as either an undergraduate or graduate in the following areas (and please use descriptive titles rather than course numbers):

Ecology:

Statistics:

Question 12

What is your coding experience? (any language)