

# IE529 Computational Assignment 1: Grading Rubric

November 28, 2017

## 1. **Problem 1:** (25 points)

- (4 pts) Pseudocode or code.
- (2 pts) 2 matrices with 4 components for de-meaned and standardized data.
- (2 pts) Associated variances for de-meaned and standardized data.
- (2 pts) Portion of the variances.
- (4 pts) Plots for de-meaned and standardized data.
- (2 pts) True components.
- (2 pts) Number of clusters.
- (2 pts) Number of species.
- 5 free points.

## 2. **Problem 2:** (25 points)

- (6 pts) Simple program. 1 point off for using polyfit or other pre-defined functions.
- (2 pts) Selecting correct order of model.
- (2 pts) Proper reasons for selecting the order. (keyword: overfitting and sum-of-square of residuals, or "elbow")
- (2 pts) Discussion of logistic regression.
- (4 pts) Plots for a linear fit and one polynomial fit.
- (2 pts) Correct coefficients for models.
- (2 pts) Sum-of-square of residuals for two models (a linear fit and one polynomial fit).
- 5 free points.