Objectives:

- Provide an introduction to common experimental designs
- Provide knowledge and practical coding skills necessary to analyse such designs

Our assumptions:

- Students have very basic knowledge of statistics
- Familiar with basic biological or genetic concepts
- Very basic coding skills (or high ambition to learn)

Topics we'll cover:

- Statistical inference
- Hypothesis testing
- Linear regression
- Penalized regression
- ANOVAs
- Mixed linear models
- CRD, RCBD, split-plot designs, unreplicated designs
- Correlated observations
- Genotype-by-environment interactions
- Multi-trait models
- Dimensional reduction approaches

May be subject to change

Grading:

- Short problem sets (10? in total) - 300 pts
- Final problem set - 100 pts

Grading policies:

- Reproducible analyses
- Documentation of code
  - Feel free to stray from examples and write your own code
- Interpretation of results
- Opportunity to correct short problem sets

Discussion is encouraged, but please don't copy code