Project Design:
1. Articulate aims and overarching goals of projects
2. Articulate project hypotheses (and null hypotheses)
3. Articulate expected experimental outcomes (the type of data that will be collected, specific comparisons that will be made, and whether the anticipated outcomes of comparisons will justify rejection of the null hypothesis
4. Assess whether chosen methods and comparisons adequately address project aims
5. Identify and isolate (and parameterize, when applicable) independent and dependent variables as well as experimental and control conditions
6. Construct protocols with balanced conditions, and an appropriate number of trials for planned statistical analyses

Scholarship:
1. Appropriately cite previous literature.
2. Identify sections of previous literature that support a fact or point of view.
3. Interpret data figures to extract information from published papers and assess whether data figures support author claims
4. Summarize and articulate theories and hypotheses surrounding specific research questions
5. Relate project goals, aims, and hypotheses to existing theories and hypotheses in the field and articulate the potential impact of project findings

Experimental skills:
1. Maintain consistent records across experimental sessions and subjects
2. Organize data and metadata consistently
3. Estimate data quality and implement quality control measures before, during, and after experiments
4. Establish (and record) points of reference during experiments for comparisons
5. Acquire appropriate numbers of trials for adequate statistical power

Analytic skills:
1. Apply basic parametric and nonparametric statistics.
2. Estimate statistical power
3. Write functions to apply transformations to multiple large data sets
4. Interpret traditional forms of data visualization (bar graphs, histograms) and assess their ability to accurately represent data