The Psychology Department is planning to assess the development of methodological and statistical competencies in our majors. Our goal is to assess both broad quantitative and scientific reasoning skills (e.g., the prerequisites for making a causal conclusion) and more specific skills that are critical to conducting and interpreting psychological research. We have identified the following topics as the focus of the assessment:

- Matching methodological approaches to research questions
- Conditions required for causal interpretations
- Interpreting results
- Understanding basic sampling issues and how they affect generalizability, variability and statistical power
- Null Hypothesis/Significance Testing, statistical power and effect sizes
- Reliability and Validity

**Departmental Learning Goal:**

Students will develop critical quantitative and statistical reasoning skills and learn basic principles of research and data analysis so that they can critically evaluate research across multiple areas and apply basic research methods in psychology to investigate relevant questions.

**Departmental Learning Objectives:**

1. Critique research conclusions appropriately based on the nature of the research methods employed.
2. Read and interpret tables and figures (e.g., seeing patterns that exist in the data).
3. Develop a general understanding of statistical inference, sampling, major statistical techniques, the concepts involved in interpreting the outcome of statistical analysis, and the utility and limitations of statistical analysis to evaluate evidence.
4. Develop the ability to describe, display and interpret patterns in data (i.e., to construct appropriate tables and figures) and the results of statistical analyses, and learn to summarize results and discuss their implications.

**Learning Strategies**
The strategy for achieving goals and objectives is the departmental curriculum, as well as extracurricular offerings and opportunities sponsored by the department.

**Learning Assessments**

The department is developing a short-answer test with items drawn from relevant standardized tests (e.g. from the Psychology GRE) and items created specifically for this purpose to assess learning objectives. We are building on a similar recent effort by the Haverford Psychology Department.

Senior psychology majors will be asked to complete the assessment by the beginning of February (early in the second semester). The assessment will be administered on the Web.

We also plan to offer a similar assessment prior to students having completed substantial coursework in the major. Upon enrolling in a 200 level Psychology course at Bryn Mawr or completing a major plan, students will be asked to complete the assessment. This assessment will allow us to obtain baseline information to compare to the senior assessment.

At both the early and late time points, students will receive brief feedback about the percentage of correct responses they provided (likely broken down by content domains).