

## **Student Learning Outcomes for the Statistics Major**

Although not all goals of the Carleton statistics program are easily quantifiable, the Department of Mathematics and Statistics has catalogued six learning goals that can be measured.

1. Statistics majors will be able to
  - a. formulate and interpret a variety of statistical models and
  - b. assess the appropriateness of a given statistical model to determine how well the model aligns with data.
2. Statistics majors will be able to employ simulation and resampling methods to
  - a. analyze data and
  - b. understand properties of statistical procedures.
3. Statistics majors will be able to use a statistical programming language to manipulate data.
4. Statistics majors will be able to collaborate with members of a team and to use a reproducible workflow.
5. Statistics majors will be able to communicate statistical ideas to both general and technically-savvy audiences
  - a. using written and oral forms of communication,
  - b. by creating appropriate visuals, and
  - c. drawing appropriate conclusions, especially with respect to study design.
6. Statistics majors will be able to identify ethical issues in the statistical analysis cycle.

### **Assessment Plan**

In the fall of each year, we will choose one of the six goals for assessment. Within any ten-year period, we will assess each goal at least once. We will collect appropriate data during the academic year, and at either the last department meeting of the academic year or the department retreat the following fall we will discuss the data and formulate an appropriate response.