Designation of Courses to be Considered as Including a Laboratory Experience (EL)

Component Content/Methodology

Lab courses are identified according to the recent definition developed by the National Research Council (2005): "Laboratory experiences provide opportunities for students to interact directly with the material world (or with data drawn from the material world), using the tools, data collection techniques, models, and theories of science."

Lab courses involve discussion of data collection and analysis through scientific methods. Such lab courses are intended to expose students to research methodologies and experiences involving real-world data analyzed by the students, according to scientific methods appropriate to the discipline. Ethical issues related to research should also be addressed, as appropriate to the discipline and topic of the laboratory course.

Lab courses must include at least one credit hour of instruction devoted to the laboratory experience, which focuses on techniques of collection and analysis of real-world data. Students must be active participants in data analysis, if not actual data collection (i.e., it is not sufficient to simply be instructing students in how to collect and analyze data).

Experience Goals

- familiarity with one or more topics from working with 'real world' data on the topic(s);

- familiarity with a set of methods, techniques, skills, or tools for data collection and for data analysis appropriate for the discipline or topic of focus;

- an understanding of the application of the scientific method to investigating questions using 'real world' data;

- an understanding of ethical issues with research, as appropriate for the discipline.