

**Who should consider doing a course project?** Students who choose to do an optional course project should do so under the expectation that the work involved may be substantial— perhaps involving 40 or more hours of work beyond the regular expectations in the classroom. Projects enrich rather than replace learning in the regular course curriculum. If you are taking the course for honors, I strongly encourage you to complete a course project. (Honors students who do not wish to do a course project must see me for an alternative.) Students who are already involved in research on campus may be able to incorporate that research into a project. Projects may be undertaken by individuals or in groups of two or three students. Do not think of a course project as a means of extra credit, but rather as an optional honors project available to all students in the course. A successful project will result in one additional mastery point for grading purposes.

**What is expected if I choose to do a course project?** A project will include finding a biological question of interest, designing an experiment, producing data, analyzing the data statistically, and writing a report. The statistical methods required should not extend too far beyond what we will cover in the semester. You can expect that you might need to read ahead in the textbook or to find additional sources of statistical knowledge to learn how to apply methods for your project that won't be covered until late in the semester.

You have great flexibility in selecting a project topic— ideally it will be related to a biological science or your major. It will be important to select a topic that is of the right scope— the scientific question must be interesting and not trivial, but something for which it is reasonable to draw conclusions this semester. You must have some involvement in the design of the experiment and in the collection of data. (If you are working in a professor's lab, the design and data collection can be expected to be a collective effort of which you may be only a small part.) A previous professor of this course has made arrangements for several projects to be housed in Science House using FastPlants (plants that go through their life cycle in about one month). This is an option for students who need assistance in finding an appropriate project topic.

**When are parts of the project due?** You should let me know in writing by **Friday, September 27** that you intend to complete a project. Download and complete the Optional Project Commitment Form from the course Web page. Do not commit to completing a project unless you are fairly confident that you will be able to complete it.

A project proposal is due on **Friday, October 11**. This proposal should include a brief description of the general scientific question, a specific question that can be addressed by statistical methods, a detailed description of the method of data collection and the variables to be measured, and some initial ideas on how to analyze the data.

A first draft of the proposal is due on **Monday, December 2**. This draft should include a description of the scientific question, a description of the experimental design, a description of the method of data collection, and exploratory data analysis of any data already collected. It may (but need not) include a final statistical analysis of the data.

The final project report (10–20 pages including graphs and tables) is due on **Wednesday, December 11**. The format of this report will be described later. You should also send via e-mail a computer text file with your experimental data in a format suitable to be read into R.