

## Project Description

### Teams

The instructors will divide the class into project teams, with two students (typically from different departments) in each. Responsibilities for all project activities should be shared by the team members, including defining the content of the project, any analyses undertaken, preparation and delivery of the project presentation, and preparation and submission of the final report. Each team member needs to specify their contribution to the project. However, except in extreme cases (e.g., one student contributed nothing), scores earned on assessed materials will be credited equally to all team members.

### Proposal (Due on Feb 27)

In consultation with their teammate, teams will develop and propose a project that attempts to solve a scientific question in plant science by analyzing more than one type of data. Potential data sources include the students' lab, publicly available data, and other resources that the instructors may make available.

No later than the start of class on Tuesday, Feb. 27, each team will need to submit on CANVAS a single page proposal describing their planned project using the proposal template provided. The proposal will need to be reviewed and approved by the instructors.

Teams are encouraged to schedule a time to meet with one of the instructors early in the semester to discuss the potential content of their project before finalizing their proposal.

### Final report (Due on Monday April 16)

Each team will need to prepare and submit a final report using the report template or the template of an academic journal. Necessary elements of a scientific journal publication such as literature review related to the project topic should be included.

The final report will be graded on its scientific content and style (e.g., clarity of presentation). The report should be of an appropriate length of a journal or conference publication. Teams are encouraged to include tables and figures in their report, where and as relevant. **The project report will be due at 5pm on Monday April 16.**

The final report will also be peer-reviewed by other students. The peer review report of the other students will not affect the grade of the final report.

## **Class Presentation**

Toward the end of the semester, each team will present the results of their project in a 30 minute class presentation (25 minute presentation plus 5 minutes for questions). The order of the presentations will be assigned by the instructors. The presentation should include:

- an Introduction;
- a Description of the Data analyzed;
- an overview of the Methods adopted for the analyses, including their strengths and weaknesses'
- a sketch of the Results obtained;
- a Discussion of those results (the results and discussion can be combined or interlaced if so wished); and,
- a summary of Conclusions and Implications of the project.

Teams are encouraged to prepare visual aids (e.g., PowerPoint or pdf slides) for their presentation. Both team members should speak.

Grading will be based on the clarity and flow of the presentation, including the coordination among team members in its delivery, and the presenters' engagement with their classmates in inspiring and answering questions at its conclusion.

## **Peer-Review (Due on April 26)**

Immediately after the final reports are due, the reports will be assigned to individual students for peer review. The student reviewer need to review the final reports based on its scientific content and style (e.g., clarity of presentation), and write a review report (1-2 pages). The reviewing process should be single blinded, and student reviewer is not allowed to speak to the authors of the final report that s/he is reviewing. **The reviewer report is due at 5pm on April 26.**

The reviewer report will be graded based on its scientific insight, carefulness and style. The reviewer report will be counted towards the grade of the student reviewer, and have no influence on the grade of the final report being reviewed.