EEB C119B/C219B– ***Guidelines for final reports***

Final project reports are due on Tuesday June 13 by noon. Students are welcome to submit the report before this time. Reports can be submitted electronically on Slack, as a single PDF file with your name in the filename. In fairness to other students, reports will be penalized 10% for each 12 hours (or part thereof) that they are late, so please submit them on time.

Here are pertinent excerpts about the projects from the syllabus:

Undergraduate course requirements (EEB C119B)

At the end of the quarter, each team will make a final presentation and then will submit a project report detailing their work. Undergraduate reports will be 6-8 pages of text, single spaced, and will follow the structure of a scientific paper. Undergraduate teams are expected to formulate and analyze a non-trivial modeling study on an ecological problem; this is not expected to be publishable, though students will be encouraged to strive toward this goal.

Graduate course requirements (EEB C219B)

At the end of the quarter, each student will make a final presentation and then will submit a project report detailing their work. Graduate project reports will be a minimum of 10-12 pages of text, in the format of a manuscript for submission. Graduate students will also submit a research plan, with timelines, to complete any unfinished components of their project and carry the work to completion (i.e. submission to a scientific journal or inclusion in their dissertation or thesis).

General guidelines

The report should be entirely self-contained, i.e. it should tell the whole story of the study, including the introduction and motivation of the problem, the methods used, the results, and your interpretation and discussion. This is intended to give you a chance to practice your skills in presenting the results of a modeling study, from start to finish, in an important format used for professional scientific communication. As in any manuscript, you should be selective in what content you show: show enough that the audience/reader can understand what you did, and why. Select the results that tell your story in the most compelling way, and discuss them in a thoughtful manner. Do not do a 'core dump' and show everything you tried, and every plot you made.

If you have not been able to complete as much of the study as you had hoped, tell the story of the results you have obtained, and then describe future directions (briefly) in your discussion. I do expect that everyone will have some significant and interesting results to show, and that you will have thought hard about these and understood what they mean. This project has been the only work associated with this course, so there has been lots of time to make progress.

Report guidelines

As described above, undergraduate reports will be 6-8 pages with the classic structure of a scientific report; graduate reports will be 10-12 pages in the format of a manuscript. Broadly these can follow the

standard structure (Intro, Methods, Results, Discussion), but as in real manuscripts you can adapt this framework to optimize the clarity and narrative arc of your report. The report should give sufficient detail about methods and results that the reader can learn exactly what you did (as in a published paper, where the reader should be able to repeat the work based on what is written). This will almost certainly include one or more diagrams of your model structure, as well as model equations. The report may show more results than the presentation (where time constraints may force you to pick your favorite results), but you should still be selective and think about ways to show your findings in a compact manner. Every plot you include should be explained, and should be part of the 'story' you are telling to address your central question. Look at published modeling papers to see appropriate style and depth of detail.

The stated length limits reflect single-spaced text, with figures and tables embedded, but references do not fall within the length limit. Figures and tables should be compact and well-formatted (i.e. make sure all axes are labeled, in a consistent manner, and the figures are scaled appropriately to convey information without wasting space), and should have captions with all relevant details explained. If you present side-by-side plots, try to standardize axis limits for ease of comparison. Think about ways to plot your findings efficiently, i.e. don't just plot a bunch of time-courses produced by your model, but make plots that highlight key relationships or parameter dependences. Do not use oversized figures to pad the length of your report – this will inevitably mean you are short on content, which will be noted. On the other hand, do pay attention to writing a concise and focused report. As in a manuscript for submission, longer is not better especially if the material does not warrant the length. If you have additional technical material, or additional model results that are similar to your main results (e.g. results from a sensitivity analysis), you can make a 'supplementary information' section – but please keep it as concise as possible.

Reports will be graded using criteria similar to the presentations:

Introduction: was the problem motivated well? Was the research question clear?
Methods: was the model described with appropriate detail? Were choices explained, where needed?
Results: were model results interesting and non-trivial? Did they address the question? Were they described in a logical manner, to form a good narrative arc for the project?
Discussion: were findings related to the research problem, with broader context provided? Were any special considerations about the model (impacts of assumptions, future elaborations, etc) discussed?
Scholarship: was the scholarly literature cited where appropriate? Were previous studies referenced, to motivate the work and/or as comparison points for the findings?
Visual impact: were the figures clear and attractive? Was the report nicely formatted and easy to read?
Writing: was the text written clearly and with good style? Was it free of spelling or grammatical errors?

Graduate students: please include a brief appendix (a few sentences) describing your plans to proceed with this project, i.e. what is your goal for the work (publication? dissertation?), what is your research plan, and on what timeline?