GE 509 – Applied Env. Statistics
Project Proposal

DUE Friday Feb 9th, 5pm

1-2 pages, double spaced

One of the core components of the class is a semester-long independent analysis and write up. Some of your most valuable training in data modeling will come from the application of the techniques we are learning to your own research problem. The techniques covered in this class, for both modeling and computation, will be used for your independent project. It is now time to begin thinking about and planning your project.

The first task in this project consists of a short prospectus on the topic you would like to work on for the independent project. The project should involve fitting models to data and should be a more involved analysis that makes use of the techniques you are learning – one line calls to "lm" or "anova" will not be accepted, nor will analyses using more sophisticated "canned" packaged. We'd recommended looking ahead in the syllabus about some of the topics we will be covering to help you generate ideas for types of analyses.

One of the primary goals of this class is to learn how to build our statistical models around our scientific questions and our data, rather than let simple statistics drive the questions we can ask. In **one to two pages**, briefly state the research question/hypothesis you aim to address and describe the nature of the data. Discuss any design issues, such as experimental manipulations, replication, spatial or temporal aspects of the process or data, types of variability that need to be accounted for, etc. If possible, discuss the type of model or models you are considering (no math needed at this point, that's the next assignment). If you do not yet have data of your own, you can use the data of others (e.g. colleagues, public databases, etc). You can also simulate data like those you expect to collect – this can be useful even for those who do collect their own data as a way to estimate the power of your analysis under different designs & sample sizes.