Lectures
All lectures will be held from 10:40 am-12:10 pm on Mondays and Thursdays in BH 212. When Monday is a holiday lectures will be on Tuesday.

Discussions
Discussion sections are a required part of the course. Three sections are assigned on Wednesdays.

Office hours
The TAs will be available for office hours on Wednesday evenings with food provided. These are not mandatory. They provide you with the option ask any questions you have about the lecture material.

Problem Solving Workshop
The problem sets to be discussed in class are designed to help you practice the type of thinking and analysis you want to develop as an experimental scientist (and the thinking we will be testing you on in your final exam). All the discussions will be using the whiteboard. You will be divided into four groups. Each group will be assigned one problem. You are expected to meet amongst your group a few days beforehand to discuss the problem and formulate the solutions that you will describe during the in class workshop. The problems will be typically handed out the Monday of the week of the workshop.

Research Proposal

Formatting: Use Arial font, at least 11 point, and 1" margins on all sides. Place titles and any subheadings in bold. The body of the proposal should be at most 2 pages. Figures and references can be included in a third page

Topic: In preparation for the final exam, students are asked to write a one to two page research proposal (references and figures can be relegated to a third page) on a BioReg-related topic that should be well-focused and based on a clear, testable hypothesis. The proposal should NOT be based on a previous research project of yours (i.e. senior thesis project, postgraduate research project, rotation project). The written proposal is an important document, because you have to properly synthesize information, organize your thoughts, and think through things systematically to write a good proposal. You have opportunity to modify the proposal you present at the exam, especially after feedback from faculty members on your written proposal. But poorly written proposals often correlate with poor performances on the exam, because they usually reflect sloppy reading and thinking. So take them seriously

Scope: As a general guideline, the proposal should cover a body of work that a team of two scientists could complete in 2-3 years; that is, you can propose more than one line of experimentation, and an experiment, if successful, can be followed up with additional experiments. It is important that you be able to explain, what is known in the field, what key questions you wish to ask, how your system and experimental design will address those questions, and what you can and cannot conclude from the possible results of your experiments

Design: You can assume that you will be able to generate commonly made reagents (e.g. antibodies, tagged constructs, and conditional mutants), but you should know how they will be generated and confirmed to be valid reagents. Experiments should be feasible (talk to people working in your proposed system to help you judge what is feasible), but do not get stuck on trying to design bulletproof experiments that are guaranteed to be conclusive since they don't exist. All experimental systems have their strengths and weaknesses; we would like to know whether you understand what those strengths and weaknesses are and how they influence your interpretation of your results. Also, some experiments may be more informative if you obtain one set of results rather than another; be able to explain why that is the case, and whether there are follow up experiments you can do, especially for the less informative results.

Aims: As this is not a grant proposal, you can relax (not fully eliminate) the proscription against making specific aims dependent on one another that was drilled into you during your fellowship preparation last fall. Occasionally a key question must be addressed first before determining which of two very distinct directions to pursue. If you think one outcome is more likely to occur than others, and can defend that reasoning, we will tolerate having some specific aims dependent on this outcome in your written proposal; be prepared in the actual exam, however, to be asked what you would do if the other outcome is observed.