The point of filling out this form is to give you a chance to think about and focus on what you need to learn and do to accomplish your research goals in the coming semester. At the end of the semester you will submit a report about how the experiments turned out and about how your plans changed as you worked on this research project. These two documents will serve as a record of your research experience that we can refer to when we are writing letters of recommendation for you and reports on students that we have trained.

**Background**

Write one to three short paragraphs explaining the scientific question(s) that you will be studying and/or the motivation for the experiments you are planning for this semester.

**Research Plan**

**Specific Aim #1:** **One or two sentences summarizing the first major research question and the approach that you will use in your research project to answer it this semester.**

Write several paragraphs explaining the details of the experiments that you plan to conduct. When applicable/possible provide (1) an estimate of how long you anticipate each experiment will take, (2) what each experiment will tell you about your question, (3) what positive and negative controls you will include in each experiment, (4) how you will analyze the data, (5) an estimated number of flasks/tubes/plates that you will need per week if you are doing an evolution experiment (6) any special materials that you need to order for the experiments, with catalog numbers and vendors, and (7) backup plans for other alternative approaches you could try if an experiment fails or does not give clear results.

**Specific Aim #2:** Continue with Specific Aim #2, #3, etc, in the same format for each major experiment you will be working on.

**Key References**

Include citations for 2-5 key papers that have techniques or background information that you will be using to complete this research.