

## Reynolds Lab Notebook Policy

Your lab notebook is a legal document, and provides a clear record of your research in the lab. A good notebook should be sufficient to enable anyone else in the lab to repeat your experimental results. The primary data notebook must be bound and will be provided to you by the lab. A few key requirements to remember:

- It is OK to also keep an electronic record of your experiments, but a paper notebook is (for now) necessary – this is more obviously accessible to everyone in the lab, and provides a dated, hard-copy record of your work.
- It will be saved for at least five years after completion of your project, and should accordingly be archived when you leave.
- It must always stay in the lab, no exceptions. If you need some component of it for writing at home, or to take to a collaborator's lab, make copies to bring with you.
- Entries should be made as you perform your experiments, in ink. This is important to ensure that you don't miss describing anything, and as an additional step for catching errors in your calculations/recipes/protocols. Given that you'll be writing as you go, mistakes are expected; please cross out errors with a single line.
- Include all data!!! Don't leave out negative results or errors, just note them clearly.
- All the pages should be filled – if you have blank space on a page, please cross through (the idea is to not leave any areas that could be “back-filled” later on)
- Protocols don't have to be written out each time, but they should be indexed (and referred to by page/date when repeated)
- Time is an important and often overlooked aspect of experiments: particularly when making fitness measurements make sure to note when you put in overnights, when you started an adaptation step, etc.
- Record lot numbers for enzymes (including polymerase)
- Photographs/gel images should be labeled to indicate bands and relevant molecular weights.
- When you begin a new line of experiments (for example, cloning a new construct, building a new library, conducting a new sequencing experiment or set of fitness measurements) write a statement of purpose that provides a clear overview of what you are doing and why.
- When you conclude the above line of experiments, write a summary, including any relevant graphs/plots/tables that describes your final results and interpretation of the experiment. It is expected that this will often include a “troubleshooting” section that describes what to improve or fix for next time.
- Much of the data collected in our lab requires additional computational analysis for interpretation. Companion analyses should be referenced and summarized in your notebook (i.e. where do the files live on your computer, github and/or the biohpc?) The analysis itself should be thoroughly commented with a header or readme file that provides an overview/statement of purpose of the experiment.