Laboratory Notebooks and Reports:

You must have your laboratory notebook with you whenever you are carrying out any experimental work. All original data belongs in your notebook. Never write data on loose sheets of paper with the intention of transferring them to the notebook at some future time; you may lose the values along with the time spent obtaining them. In case of an error, cross out the incorrect figures with a single line so that they may still be read, and write the correction next to or above the original. Use permanent ink - **not pencils!** Lab reports will consist of the copies of your notebook for each experiment. Please use the following format.

Title and Date

Purpose: A brief statement of the objective of the experiment. **Also include the balanced reactions for the experiment.**

Physical constants: List all relevant constants for the compounds used. This usually includes molecular weight, b.p. and density for liquids, m.p. for solids. This also includes relevant data for reaction solvents (b.p. if you are heating the reaction), and **hazards such as toxicity and flammability**. **Also include amounts of the reagents used in your experiment and the theoretical yield of the product.**

Procedure: A detailed summary of the steps you will be performing during the experiment. This must be done **before** lab. You should be able to follow your summary without using the textbook or handout. It is convenient to write this summary in one column (about 2/3 of the width of the page) and leave a small column blank to record any changes in the standard procedure or observations of your reaction.

Results: List the results of your experiment **in a brief table**, including amounts (in grams and moles) of reagents used, **amount of product obtained, % yield of the product**, m.p. of the product (if it is a solid), b.p. of the product if it was obtained by a distillation, and relevant spectral data (list peaks and interpretations).

Conclusion/Discussion: A brief (about 1-3 pages) summary of the relevant information for the experiment. What do your results tell you? What was the mechanism of the reaction? What functional groups or structural features of the starting materials were important in determining the outcome of the reaction? What is the driving force of the reaction you performed? How pure are your products (using your m.p/b.p data and spectra)? Explain the results of any tests you performed on the product. Try to account for any problems such as poor yields or impure products. **Do not** mention typical laboratory difficulties such as: "Some solid was left behind in the flask because I couldn't scrape it all out." I will take points off for saying that!

Questions: Answer any assigned questions or problems.

Everything up to and including the procedure summary should be completed before beginning the experiment. If you do not have the procedure summary done before lab, you will have to leave lab and complete the summary before being allowed in laboratory.

Safety and Cleanliness: The best way to be safe in lab is to be prepared. Think about what you will be doing in lab before you begin. What glassware will you need? etc. You must wear safety glasses at all times and contacts will not be permitted. They are extremely hazardous, so wear glasses. Dispose of all wastes in the appropriate manner. Be sure that you mark the contents of your waste on the bottle

label. Being safe and clean shows respect for your classmates, yourself, and for the people using the lab after you. This is your chance to make CCSF a more pleasant and place for the other students!

208B Spring 2010 Experiments:

Note: **All the experiments will be from handouts**. All of the reading assignments refer to *Techniques in Organic Chemistry*. Hopefully, all the techniques are still fresh! All of the labs are on **Tuesdays**.

Date	Experiment	Reading
Jan. 19	Check-in/NMR training	
Jan. 26	NMR/Aspirin Synthesis	Ch. 13
Feb. 2	NMR/Aspirin/Luminol	Ch. 13
Feb. 9	Nitration of Methyl Benzoate	Review microscale technique
Feb. 16	Nitration/Friedel Crafts Reaction	Ch. 1, 3
Feb. 23	Friedel Crafts Reaction	Ch. 1, 3
Mar. 2	Aldol Reaction	Review Recrystallizations
Mar. 9	Aldol Reaction	
Mar. 16	Dyeing	Wear dark clothing – bring a white t-shirt to dye
Mar. 23	Fisher Esterification	Review extractions and GC
Mar. 30	**SPRING BREAK**	**SPRING BREAK**
April 6	Fisher Esterification/Synthesis of Soap	Water is the enemy! – read Ch. 9 and dry glassware for Grignard Reaction
April 13	Grignard Reaction	Water is the enemy!
April 20	Grignard Reaction	
April 27	Investigation of a Mechanism	
May 4	Investigation/Diels-Alder Reaction	
May 11	Diels-Alder/Lab Final	Your Lab Reports
May 18	Check-Out	
May 25	OPEN LAB	