Guidelines for final paper for Senior Seminar (CHM 4930)

The paper should be at least 4 pages long, single spaced using 12-point Times New Roman font (or 10 pages double spaced), using standard margins (1 inch top, bottom, and sides). This does not including tables, figures and references, which will increase the length of the paper. The formatting may place figures and tables within the body of text, but the total length should conform to these guidelines. All papers should include references. Most will benefit from selected tables and figures.

There are many kinds of scientific articles: Research articles report on one particular research project; Communications report very briefly on hot work and are typically followed later by full-length research papers; Review articles cover a body of work done by several people over a period of time. The type you are probably most familiar with is the standard Research article.

For those of you reporting on research published in the literature, the format for your paper should be that of a Review article. For the few of you reporting on your own research at FIU, the appropriate format will be closer to a Research article.

For examples of Review articles, look at articles in Chemical Reviews or any of a number of publications whose titles begin Current Opinion in …. (e.g. Current Opinion in Chemical Biology). Below are outlines of the two format types that you might use for your paper. In addition to what is given below, you should have a Title, a Reference section, and probably several tables and figures.

Review paper format:

- **Introduction**: Introduce the research problem. Discuss context and significance. Some background information may be appropriate.
- **Methods**: Outline methods used to do research on the problem. Be general. Do not specify fine details such as quantities of reagents used in particular experiments. Convey the basic kind of experimental approaches used.
- **Results**: Summarize the important results and conclusions from the body of research. Interpret significance. Critique where appropriate.

**Note**: You will probably make reference to more than one paper, even if your presentation focused on only one paper. However, if you do limit your discussion to one particular paper, obviously the discussion will be less broad, and it may be appropriate to give a bit more detail in the methods section. But still, please do not specify such things as quantities of reagents.
Research paper format:

- **Introduction**: Introduce the research problem. This will be similar to that for a Review paper, but will be narrower and more specific.
- **Methods**: Outline methods used. Give specific details (this section will be different than for a Review paper, as a Research paper will give more specific detail about methods)
- **Results and Discussion**: Present your results, interpret them and discuss their significance. It may help to break this into two sections: (1) Results (just present the results), and (2) Discussion (interpret and discuss significance). Whether it is better to make one section or two depends on the case.
- **Conclusion**: This is optional. You may want to summarize the most important findings here. But sometimes the Results and Discussion does the job adequately, and a separate Conclusion section is not needed.