

Instructor: Prof. Rory Waterman
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Meeting time: Mondays, 2:20–3:10 PM in Lafayette L-403.

Office hours: Mondays, noon–2:00 PM.
Always free to make an appointment.

Course description: We are spending the semester addressing a key skill for chemistry majors—the presentation of data in written form. Whether it is your data or not, it is important that you can clearly present the data and provide some assessment of its value.

The plan is to use the semester to selected and build your skills in finding, understanding, and writing about the chemical literature. This requires ample outside reading as well as some discussion. Finally, learning to write requires practice, which we will do a couple of different ways.

Learning goals: The goal of this course is for students to find information in the chemical literature, give some assessment on the value of that information, and disseminate that analysis in written form. Therefore, we need to have students

1. Find ideas in the chemical literature using a variety of techniques.
2. Synthesize important ideas from multiple sources.
3. Evaluate literature with respect to the quality of conclusions and their potential impact.
4. Summarize data into short summary format.
5. Analyze and report on a theme from multiple sources.

Literature analysis: A major goal of the course is to make judgement on the quality and value of information in the chemical literature. A major pitfall for new chemists is the assumption that all published work is of high value and utility solely because it is published. Practicing chemists must make value judgements about what data they encounter. As such, we will practice with current examples across the chemical sub-disciplines. Early in the semester, we will discuss how chemists read and analyze literature.

You will practice this activity and write brief analysis papers, and the group will discuss the content and analysis in class. The papers will be no more than five pages, summarize the key points of the work, and provide references for any key ideas. An exact format will be discussed in class.

Reports: The culminating activity of the semester is a report on a topic of your interest. Your main task in the early papers of the semester is to select a topic for report. Topic selection is a significant challenge. These are my three major thoughts on this subject.

1. Your topic should be current, which would be demonstrated by significant activity in the last five years.

Course Schedule

date	Topic/assignment
8/28	Literature searching I: Science, Literature analysis basics, & ChemDraw
9/4	No class—Labor Day holiday
9/11**	Literature searching II: Library; reading literature, cont'd.
9/18	<i>Literature analysis #1</i> ; Effective writing
9/25	<i>Literature analysis #2</i> ; Referencing and plagiarism
10/2	<i>Literature analysis #3</i> ; Effective writing II
10/9	<i>Paper topics due</i> ; topic discussion
10/16	Group analysis of literature
10/23	<i>Paper draft 1 due</i> ; peer review criteria
10/30	<i>Peer reviews due</i> ; recap of the review process
11/6	Group analysis of literature
11/13	<i>Paper draft 2 due</i> ; Group analysis of literature
11/19	5.