Lecture 14

1. Analyze the comments from the reviews, given. These are available only after the first draft is complete. Address all comments. Adopt only those comments that you agree, and contest those that you disagree. These will be sent to the reviewer for further debate (usually).

Content Level Revision:
2. Check the list of contents and re-organize them, if necessary. Make the corresponding changes in the revised draft.
3. Check for missing definitions, equations, graphs, tables, and citations.
4. Add or subtract examples as suggested by the reviews, unless you disagree.

Structure Level Revision:
5. Check for missing transitions between paragraphs, sentences, sections, and themes. Revise accordingly.
7. Strengthen introduction and check the level of adaptation to your audience. Is the level sufficient, less or more than necessary? Revise.
8. Evaluate the depth of background. Check if additional background is needed or if certain details are to be omitted.
9. Check to see if each topic starts with a general discussion and then becomes more specific. Such a progression is appealing for the reader and easy to see the context of the point you are making.
10. Check to see if you start discussing a method or application with a simple or basic example and then discuss more complex cases. This approach prepares the reader for the more complex ideas.
11. Check the level of detail in each paragraph. Increase, decrease or leave unchanged, as necessary.
12. Check for the discussion of the each concept, and each discussion should immediately be followed by examples to clarify the corresponding concept.
13. Make sure that all examples are organized in a sequence. For example, from a more dramatic to less dramatic, more convincing to least convincing, or most eye-catchy to less, organic to inorganic systems, past to present or vice versa. Make sure a strict order is followed through out.
14. Check to see if you answered any questions that you have raised, or at least comment that the answer is still unknown.
15. Anticipate the questions that the readers would encounter. Answer them right away.
16. Make sure that simpler systems with few technical details are discussed first, and then present more complex and detailed analyses.
17. All data should be followed by analysis and appropriate conclusions. Presenting data without analysis is insufficient.
18. Check for headings and sub-headings. If they are missing, or new ones are needed create topic sentences and incorporate them as needed. Strengthen the existing headings and topic sentences.
19. Check for the appropriateness of all the headings and sub-headings. Modify, move, delete, strengthen or add as needed.
20. Check if additional examples are needed or if some examples are not pertinent to the topic or discussion. Move, edit, add, strengthen or omit as needed.
21. Check if comparisons and analogies can be added to clarify a topic, specific point, or a mechanism. Add a graphic, if necessary. Strengthen the comparisons, and graphics.
22. Draw block diagrams of major experimental set-ups, if missing. At least give a citation where the method is reviewed extensively but figures are better.
23. All mathematical equations must be derived or citations given where they are first derived.
24. All chemical equations should be balanced or they should be complete with important reaction conditions, yields, and other pertinent information.
25. Provide structures of key substances that are discussed, and provide official name of the compounds, if missing.
26. Check if the document is thematically organized. Strengthen the theme by adding additional/better examples, topics or comparisons.
27. Make sure that your ideas flow in a continuous manner. One way to ensure a good flow of ideas is to follow strategies such as:
   Additive: add one idea to the next and build in a logical manner with transitional words (in addition, moreover, furthermore, as well as etc.,)
Chronological: One idea follows the next, both connected by transitional words (next, before, subsequently, following, later, while, when, during, since etc.,)

Comparative: Two or more ideas can be compared to illustrate the merits or drawbacks of the ideas. Use transitional words such as: but, on the other hand, unlike, as opposed to, instead, similarly etc.,

Alternative: Discuss alternative ideas or substitutes that would work in a similar or very effective manner. Use transitional words: otherwise, however, or, neither etc.,

Causal: One idea may produce another as the consequence or effect. Use transitional words: therefore, thus, then, subsequently, as a result, so, for etc.,

Illustrative: One idea can be used to illustrate the next. Use transitional words, for example, such as, for instance etc.,

Reiterative: You may repeat the same idea in a different way to strengthen the initial understanding. Use transitional words: in other words, in short, stated another way, that is etc.,

Spatial: The ideas may flow better if they are spatially connected. You may describe how the car engine works, then the power steering, then the brakes etc. Use transitional words: under, behind, beside, on top of, next to etc.,

28. Transitional devices or links: Make sure that the paragraphs are well connected to achieve an uninterrupted flow of ideas. Several transitional devices are used to stitch the paragraphs, sections, and chapters together.  
    Transitional words (see above)
    Repeat of key words: Flow can be improved by repeating key words but this is not a strong approach but will do. Do not bury the key word at the end of a sentence. Place key words at the front.
    Pronouns: It, this, which, that, they, them are used as transitional devices. Very often these are misunderstood. The reader may not know what exactly you mean. Therefore, use pronouns with extreme care or do not use them at all.
    Summary transitions: These are very effective. Provide a summary of what has been presented and then connect to the next idea/para/section/chapter. Provide a glimpse of what is going to appear next.
    Review-preview transitions: These are some of the most powerful links.
Use a phrase or two that summarizes the previous information, and connect that information with another phrase that provides a glimpse of what is next. Use one or two sentences to achieve this. These are most appropriate between large sections or chapters.

Sentence Level Revision:

29. Check for sentence style and use the same ‘voice’ and ‘tense’ throughout.
30. Check for sentence clarity. Each sentence must mean what you intend the reader to understand. During the revision, many people recognize the problems associated with expression, which is missed in the first draft. The reader should be able to understand precisely what you mean. Make sure that there are no alternate interpretations of what you wrote. Give no opportunity for a misunderstanding. This activity is the most time consuming aspect of all revisions and the most important.
31. Highlight important conclusions or text with bold or italics but do not overdo. Extensive highlighting can be very distracting and use high lights for that special occasion.
32. Make sure that all facts are presented with appropriate citations and that others receive credit for their contributions to the topic. Give one classic citation followed by most recent review, if available. Other experts are likely to review your document and they will notice if their work is ignored.
33. Combine simple sentences and a run of simple sentences is not a good style. Make sure that words are not repeated often, at least within a few lines.
34. Break-up extra-long sentences into manageable bytes. Check clarity after the rearrangement.
35. Check for sentence-level transitions. All sentences must be connected and they should flow logically. Provide guidance to the reader. However, although, even though, etc., are great transition words.
36. Place the most important part of the sentence at the beginning, not at the end. End usage is a common problem.
37. The word 'it' is a good transition word but 'it' is also one of the most misunderstood words. Avoid using 'it' at all costs!
38. Check for spelling, run a spell-checker. Check for grammar, and missing punctuation. Remember, death by thousand cuts.