**CHEM523 Protein Assignment Oral Presentation Grading Rubric**

The purpose of this assignment is to give you an opportunity to communicate scientific information about two proteins that you have become an expert on during the semester. Oral presentation skills are a vital part of a scientist’s toolbox and must be practiced to reach their full potential.

Your talk must adhere to the following guidelines. Failure to include any of the elements listed below will result in point deductions.

1. Your talk must be between 13 to 15 minutes in length. For every 30 seconds under or over these limits, you will lose 2 points.
2. Your talk must include both of your assigned proteins.
3. **You may not use any papers, notes written on your hands, or other presentation aids in your talk.**  You must have the talk memorized and be prepared to deliver it without external aid.
4. You will have access to the whiteboard during your talk.
5. Your talk must be in Powerpoint format and **you must be certain that any images you include will show up on the school’s computer when you present it**. “The computer isn’t showing my image, but it did at home!” is not a valid excuse and will result in significant point deductions if not outright failure of the assignment.
6. Your discussion of each protein must include:
   1. The name of the protein and the organism the protein comes from.
      1. If the organism has any interesting traits/history/features, you are allowed to have up to 2 slides on the organism itself.
   2. The chemical reaction catalyzed by the enzyme
   3. Any known importance of the protein to agricultural, industrial, pharmaceutical or medical applications
   4. A discussion of the three dimensional structure of the protein including: Specific domains, active site residues (both binding and catalytic), necessary cofactors, interesting features of the protein and discussion of the quaternary structure of the protein (if applicable).
   5. A detailed explanation of the reaction mechanism with figure(s).
      1. Your mechanism must include all amino acid side chains involved in the catalytic reaction.
      2. You must use ChemSketch or MarvinDraw to draw your mechanism and place the image in a Powerpoint slide.
      3. Your explanation must include the residues involved in binding AS WELL AS the residues involved in the catalytic reaction. In other words, think about the best way to present the active site and the chemical reaction.
7. You must make your own figures using Chimera, Chemsketch, MarvinSketch, ChemDraw, etc.
   1. You may use up to 2 figures from the PDBSum page of each protein.
   2. These figures can also be used in your Review Article! Two birds, one stone and all that.
8. References are required for this assignment. In fact, they may be the same references you will use in your review article. Your final slide must be a slide containing all the references you have used. Any figures that you have taken from articles or websites **MUST BE CITED ON THE SLIDE WHEN THEY ARE USED**. You should use a small font and place the citation immediately adjacent to the image/table/figure used.
9. Plagiarism of any form will result in 0 points for the assignment, a substantial penalty for the course and immediate referral to the Student Honor Court.

The point of this presentation is to show what you have learned during the entire semester. This rubric is only intended to provide a minimum set of guidelines for you to work from. The more your work reflects the spirit of the assignment, the higher your grade will be. Think about this as you complete the assignment. For many of you, this presentation will be the difference between passing the course and enjoying the pleasure of my company again in the fall. DO NOT TAKE THIS ASSIGNMENT LIGHTLY.

My advice is to write the Review Article first and then take key highlights from the article and create your talk.