

Mini-lectures:

Students are expected to give a 10-15 minute mini-lecture on some part of the material discussed in class. You will be expected to pick your topic by the third week of class and the topic should complement the readings for that particular day. Your talk can take one of two different approaches:

- 🗣️ **Discuss the readings:** In this approach, your goal should be to illustrate how science is used in the readings that we have asked you to read for that class period. For instance, in the Piskur et al. (2006) reading for this week, the authors present evidence that there are two alcohol dehydrogenases that evolved in yeasts at different times. They mention that each of these enzymes have different K_m s and that this tells us something about which one uses ethanol as a substrate and which one uses it as a product. You could spend some time in your mini-lecture going into detail about what a K_m is and how scientists measure it and what these values can tell us about this enzyme. In addition, evidence is presented that these enzymes originated in evolutionary times at different points. How do scientists figure out 'when' things evolved when there aren't fossils remaining that can be dated. This is something that you could discuss and then relate it back to the paper that we discuss.
- 🗣️ A little bit different tack you could take for a mini-lecture would be to do a case-study approach. For instance, you could find an article about your favorite beer and discuss what makes it unique. In another case study approach, you could go into details on how the 'India Pale Ale' was developed. You could also discuss how the water that beer is made with affects its flavor and the science behind this process.

No matter which approach, here is what you need to do to give an excellent mini-lecture:

1. Know your material.
2. Focus on the **science** behind the material you are presenting. What are the authors' conclusions and the specific experimental or observational data was used to support the authors' conclusions.
3. Decide what exactly the points that you want to make. DON'T TRY TO DO TOO MUCH--15 MINUTES IS NOT VERY LONG.
4. Make your slides clear and easy to understand.
5. Focus on those points with conceptual diagrams as well as some examples that make things more concrete.
6. Try to generate some discussion.

You will be evaluated on your topic choice (*is it interesting, relevant?*), how well-prepared you are and your overall effectiveness at getting your point across.

Mini-lecture Grading Rubric:

“A” Range (90-100%)

The mini lecture has most or all of the following features:

- The presentation was very clear and the presenter demonstrated a very thorough grasp of the material and background information.
- The presenter responds very clearly and effectively to questions.
- The presentation has a clear emphasis on the science behind the material presented. Specific experimental or observational data was clearly presented and discussed.
- The presentation was clear and slides were easy to understand (i.e. slides are not overwhelmed by text)
- The presenter uses examples very effectively to convey information and concepts.
- The presenter effectively generated and responded to discussion.
- The presentation did not contain factual errors.

“B” Range (80-89%)

The mini lecture has most or all of the following features:

- The presentation was clear and the presenter demonstrated a good grasp of the material and background information.
- The presenter responded clearly and effectively to questions.
- The presentation emphasized the science behind the material presented. Specific experimental or observational data is clearly presented and discussed.
- The presentation was clear and slides were easy to understand (i.e. slides are not overwhelmed by text)
- The presentation uses examples effectively to convey information and concepts.
- The presenter generated and responded to discussion.
- The presentation did not contain factual errors.

“C” Range (70-79%)

The mini lecture has most or all of the following features:

- The presentation was clear and the presenter demonstrated an adequate grasp of the material and background information.
- The presenter responded adequately to questions.

- The presentation emphasized the science behind the material presented. Specific experimental or observational data were presented adequately presented and discussed.
- The presentation was generally clear and slides were generally easy to understand.
- The presentation used examples to convey information and concepts.
- The presenter generated and responded to discussion.
- The presentation did not contain factual errors.

“D” Range (60-69%)

The mini lecture has most or all of the following features:

- The presentation was unclear and the presenter did not demonstrate an adequate grasp of the material and background information.
- The presenter did not respond adequately to questions or responded tangentially.
- The presentation did not provide sufficient emphasis on the science behind the material presented. Specific experimental or observational data were included but not adequately presented or discussed.
- The presentation was difficult to understand.
- The presentation did not use examples to convey information and concepts or the examples were inappropriate.
- The presenter did not generate and respond to discussion.
- The presentation contained factual errors.

“F” Range (0-59%)

The mini lecture has most or all of the following features:

- The presentation was very unclear and the presenter did not demonstrate even a superficial grasp of the material and background information.
- The presenter did not respond adequately to questions or responded tangentially.
- The presentation did not provide include the science behind the material presented. Specific experimental or observational data were not included.
- The presentation was very difficult to understand.
- The presentation did not use examples to convey information and concepts or the examples were inappropriate.
- The presenter did not generate and respond to discussion.
- The presentation contained frequent factual errors.