
(print name above)

ENGR-2500 Mini-Midterm

A couple of weeks ago, I shared with you a NY Times report that the head of the U.S. Environmental Protection Agency had ordered a review of EPA regulations pertaining to nanotechnology and nanomaterials. Similar reviews were instigated years ago by both European and Japanese governmental agencies and, in the eyes of many activists, a U.S. review was long overdue.

For this mini-midterm, I want you to imagine that you are a staff scientist/engineer working for the EPA. Your boss, an associate director, just received the above mandate. He/she has now turned to you to perform **a preliminary assessment of issues that have been raised concerning nanotechnology and actions that have been suggested.**

In real life (it is to be hoped) you would consult a wide range of materials and experts. But for this exam I am going to make it a little easier by asking you to read only one source, an article entitled:

“Nanotechnology: Getting it Right the First Time”

(This reading is linked from our class’s homepage, in the homework table entry for October 20th)

Based on my industrial experience, I find that most engineering and science students have not been taught this process of concise review and analysis. This, despite the fact that in a science or engineering career you are MUCH more likely to do this sort of report than the type of compositional writing taught by English professors. So let me take a little time to clearly explain what I (and your future boss) will expect:

This analysis SHOULD NOT be:

- A lengthy prose document that would make your English, History or Philosophy professor proud.
- The final word on the subject, summarizing all viewpoints, replete with quotations and references.

That is because:

- This is not a final report but instead a preliminary analysis.
- Its intent is to START a process by quickly identifying issues and likely targets for further investigation.
- You will be submitting this report to a high level manager.

And, as I was taught (when I became a mid-level industrial manager), executives are extremely busy leading to apparently miniscule attention spans. My boss told me flat out that, for such executives, in writing I had to make my essential points and recommendations within the first page - because it was unlikely the second page would ever get read. And on those occasions when I spoke directly to my VP (a fiery Nobel Laureate) I learned that I could only count on him listening for about 30 seconds.

This is not as damning as it sounds: A GOOD executive has appointed talented subordinates and believes in delegating responsibility to them. So it is plausible that executives listening to your analysis could make a relatively quick judgment as to whether you have done your research, are applying good analytical thinking, and can now be authorized to proceed further.

So this report should be short and sweet identifying particular issues and possible changes in regulatory policy. But, as analysts, you should not just summarize source material, but instead go well beyond that

to identify challenges, contradictions, conflicts and, most importantly, areas requiring further investigation and work. (Think twice if you are hoping someone is going to pay you for simple literature summaries - the people at Google and Wikipedia are well on their way to making such jobs obsolete!). Your report CAN include personal editorials as it IS only a preliminary internal report and its goal is to get ALL possible issues onto the table.

One technique would be to start by reading through the article with a yellow highlighting pen noting the more substantive sections. Then go back through those highlighted sections with a blue pen to capture key phrases. You should then add points or connections that you believe should, but were not, made. Then begin organizing those cumulative points into a logical presentation *and* set of recommendations for further work. The core of this report could well consist of just clear bulleted sentences. And, yes, the report should be no longer than 1-2 pages.

Your analysis should be typed and pledged.

This exam will be due in class on October 20

On my honor as a student, I have neither given nor received unauthorized assistance on this exam.

(sign name above)