

MET 314 Applied Thermodynamics and Heat Transfer – ETHICS ASSIGNMENT

Due: December 8, 2009 at 3:30 P.M **30 points**

Please TYPE the following assignment, 12 point font using your favorite word processor. If you use a reference, be sure to cite it. Even if you do not use a direct quote, but a paraphrase instead, be sure to include the reference. You do not necessarily need to include any extra references in your answers, but you may find some references make your argument stronger.

Be sure to proof read your answers. Please answer all questions in full sentences and in paragraph format. One sentence answers will not be considered complete answers.

Since we have been taking data as part of Thermodynamics, I thought it would be appropriate to study “Case 9 – Fabricating Data”, in Engineering Ethics by C. Harris et al. Please read 243 – 245 (and any other parts of the book that you feel are important to this assignment). Please answer the following questions in essay format. Do not list the questions by number. Answer the questions using topic sentences in the paragraphs of your essay. The essay should be at least three pages long.

From page 245

The Darsee and Buening cases raise a host of ethical questions about the nature and consequences of scientific fraud.

1. What kinds of reasons are offered (in the reading) for fabricating data? Which, if any, of those reasons are good reasons, that is, reason that might justify fabricating data? Cite examples from the two cases.
2. Who is likely to be harmed by fabricating data in these two cases? Does actual harm have to occur in order for fabrication to be ethically wrong?
3. What responsibility does an engineering technologist have for checking the trustworthiness of the work of other engineering technologists?
4. What might be done to diminish the likelihood that research fraud occurs?

Use the two cases to answer the questions above.

What if this case study had been a story of a student who made up data for labs in a class such as thermodynamics? Assume that the lab experiment is long and that each team member is responsible for a portion of the data. The data is not taken as a group, but instead each member takes certain data by themselves and then shares that data with the group.

5. What kinds of reasons might the student give for fabricating data? Are any of these reasons good reasons, that is, do any of the reasons justify fabrication data?
6. Who is harmed by fabricating data for a lab report for a class. Does the student have to be caught in order for fabrication to be ethically wrong?
7. What responsibility does a student have for checking the trustworthiness of the work of their lab partner(s)?
8. What might be done to diminish the likelihood that data fabrication occurs?  
In your summary, compare and contrast the cases of Darsee and Bruening and students who fabricate data. Are there comparisons to be made or are the two situations completely unrelated?