

MEMO  
**PADNOS SCHOOL OF ENGINEERING**  
*Grand Valley State University*

Date            July 29, 2003  
To:             Seniors on last co-op semester (EGR 490's)  
From:          Dr. Fleischmann, Faculty Co-op Coordinator  
Subject:        Academic requirements of the last co-op

Welcome to your senior year and your last co-op assignment! By now you are familiar with the routine of keeping journals with at least weekly entries, reading an assigned book, and providing some written material to us. We (the Faculty) have spent some time researching possibilities for that last book. Since this is your last co-op semester and also your senior year, we have been searching for a book that will “add a little polish” to your preparation for a career in engineering. For the past few years we have done something entirely different and concentrated on ethics. This time you will have a choice of one of the 8 following novels written by Michael Crichton: Jurassic Park, Lost World (sequel to Jurassic Park), The Andromeda Strain, Terminal Man, Congo, Disclosure, Timeline, or Airframe, or you may read Player Piano by Kurt Vonnegut. In each of his novels, Crichton addresses some issue related to science and/or engineering. The first 4 novels address mainly an ethical issue in interaction with social issues. The last 3 novels address technical issues but more “technology in interaction with society” issues as well as ethical issues. Vonnegut’s novel explores engineering and society with ethical issues as a major part. In your report identify the central issue and possible related issues if you see more than one. State the issue and show how the author develops it in the story line. Discuss what conclusions you are drawn to, and also make connections from the issues you identify to engineering practice. ( i.e. how could this issue affect you as a practicing engineer.) If you can find it, also comment on what Mr. Crichton seems to be saying about our society as it interacts with the technical community. You should be able to write at least 3 pages on this; make the book report 3 to 9 pages. If you choose Jurassic Park, Lost World, or Congo - the movie does not count, however you may want to compare the movie to the book. In Jurassic Park I found the movie to totally miss the ethical point of the book and certain details were entirely different. (I didn’t see Congo or Lost World.) What does this say about the value of entertainment in our society? All 8 books are available in popular bookstores so I did not special order them. You may even want to read all 8 and just pick one to report on!!!! I have read (and immensely enjoyed) all 8 books so I will probably handle most of the book report grading. I look forward to your serious review. In addition to the book review and the journal, also prepare a short (1-2 page) summary of your last co-op experience with somewhat of an overview of the entire co-op experience beginning with the co-op prep class. We will keep this and possibly use it in the materials that we provide for employers.

As our student numbers grow it is important for us to have information in a common format. The Co-op Confirmation forms are very important for the person who must schedule all the site visits. Return the form to the engineering office by Friday, September 5, 2003. Failure to meet this deadline will mean ½ letter grade

The evening meeting will be held on Tuesday, November 25 at 5:30 in the evening – probably in room 138E in the DeVos Center. We have started to use the evening meeting for an ethics issue discussion, so attached please find a short case with questions. Read through this, comment on it, and answer the questions. We will collect your notes (they may be handwritten) at the evening meeting. If you do not attend the evening meeting, you will be expected to prepare a more formal paper on this topic and it will be due with your other co-op materials.

In summary, the academic requirements for co-op this year are:

- a) Send back the Co-op Confirmation Form by Friday, September 5, 2003
- b) The journal with at least weekly entries
- c) Reading the assigned book and writing your analysis as discussed above
- d) Experience summary
- e) Ethics case study – notes if you attend the evening meeting or a formal paper if you do not attend the meeting.
- f) Attendance at the end of semester meeting which is set on Tuesday, Nov. 25 at 5:30 in the evening, The place will be announced – please check with the engineering office. (Most likely DeVos 138E)

THE DUE DATE FOR WRITTEN MATERIALS IS FRIDAY, DECEMBER 5. This will give us enough time to evaluate your materials for the grade. If we do not have everything by December 5 we will assign your grade based on the materials we have. Missing major written requirements will result in a grade less than an “A”.

The faculty member who completes your site visit and reviews your journal is your resource for advice and guidance - should you need it. That faculty member may or may not be your faculty advisor. These are two different systems of advice/guidance and you should feel free to use both. As always, your assigned faculty member for this co-op term will read your journal and do the site visit. If the other faculty members have not read the book which you choose to review, I will grade your book report. Your journal is confidential and will be read only by the faculty member completing the site visit. We will return journals to you personally when you return to classes in the winter.

I hope that this will be an exciting and interesting semester for each of you - a semester filled with positive learning experiences. As usual we do also recommend reading widely. Try some non-technical material as well as technical. Also try to take in a cultural event or two and keep up in current events. ( I have discovered Stephen Lawhead’s books about King Arthur and also about the time of the Celtic Crusades.

I would highly recommend these books. Also Max DePree’s *Leadership is an Art, Leadership Jazz, and Leading without Power..* are recommended.) Everyone in my family enjoys the

Redwall Series of books by Brian Jacques...I have taken up art again as a hobby, and I am learning a lot about West Point Military Academy. I would like to encourage you to build your connections in the arts wherever you can. Stop at the gallery on the Allendale Campus and see the boats on display! Certainly try to cultivate a few areas in which you can claim success other than engineering. It is not only important to you as it makes you a balanced and “well rounded” person, it is also important as a fallback if and when things do not go well in your career. Setbacks and dead-ends are actually fairly common among engineers and this resiliency will help you to bounce back and to learn from your experiences...and ultimately make you a better engineer.

**\*\*Reminder\*\*** This is not too early to start thinking about senior project. If something comes up at work that might be a candidate, make a note of it and possibly even bring it to our attention and your employer’s attention. NOTE THE INFORMATION AT THE JULY 29 MEETING!

## Ethics Case Study

*This is a true story. I have changed student and company names. Variations of this story have occurred more than once as students find co-op companies and this has also happened at a working professional level .*

Jean A. had been looking for a co-op company all semester and near the end of the semester she still did not have a company “lined up”. Chris Plouff and a few of the faculty members had been working on setting up contacts for Jean and finally arranged for an interview with Company A. She was scheduled to meet with an engineer with a high level of decision-making responsibility in the company. After the interview he reviewed the work in progress and work scheduled for the near future for the engineering staff and found a possible fit for Jean. This involved outlining the work to be done, assuring that Jean would be able to do the work and learn something in the process, and also identifying a mentor/supervisor on the engineering staff. He was also in contact with the school of engineering to be sure that the proposed work was a good fit to PSE expectations. The job was offered to Jean and she accepted it with some level of relief that she would have a co-op position. The engineer from Company A also made the necessary arrangements with the payroll department and everything was arranged for Jean’s first day at Company A. On her scheduled first day, Jean called the engineer at Company A and said that she would not be coming to work for Company A after all because she had been trying for a long time to get a job at Company B (a competitor for Company A) and they had just called her with an offer. She had decided to accept that offer from Company B (and she expected that Company A would understand and be happy for her).

1. Do you think that the student, Jean, acted in an unprofessional manner, an unethical manner, both, or neither?
2. Support your answer from the following 3 sources:
  - a.) The ASME Society Policy on Ethics
  - b.) The PSE Code of Ethics and Rules of Thumb
  - c.) The Recommended Core Ethical Values that are attached to this memo.
3. How does Jean’s action affect the Padnos School of Engineering and possibly other students?
4. Do students have responsibilities toward other students and toward the Padnos School of Engineering?
5. Obviously Company A will view this as a bad experience. What could/should the Padnos School of Engineering do about this, and in particular how should they approach Company A since they did originally have an interest in the co-op program. Should Company B be informed? (They were not informed in this case...pros and/or cons?)
6. Would anything change if Jean did not tell the truth about Company B and simply made up a story to explain why she would not be coming to work at Company A?
7. When Company A offered the position to Jean and Jean accepted, were binding obligations in place for Jean, for Company A, or both parties...and what is the nature of those obligations? What happens to the work environment when you can no longer trust a person’s word?