

## **2.83 and 2.813 Project Description for Spring term 2014**

The class project for this year has two parts; 1) the first part is a “standard” project to be conducted individually by each student, and 2) The second part is an additional advanced project to be conducted in small groups (2 students, maybe 3) by all graduate students.

The “standard” project requires that each student select an automobile manufacturing company for evaluation for sustainability. The evaluation has several parts as listed below, but is essentially based upon a web search for public information about the company. The advanced part, also listed below, is based upon picking a sustainability point of view, researching and summarizing that point of view, and then exploring how that point of view might be applied to automobile manufacturing companies.

Major steps required for the standard project

1. Select a automobile manufacturing company and go on-line to find if they have a sustainability report. We want to see what they say about sustainability and how they evaluate their progress. They must at least report their carbon emissions in some form over several years to qualify for further study. Also go to the Carbon Disclosure Project website, register for free and see if they have filed a report on climate change.
2. Also collect data on vehicle sales for the company. Number of vehicle sold per year, and sales in USD for the same years as the carbon data are needed. See if you can get a breakdown of sales by type of vehicle e.g. automobiles and light trucks, or even more finely graded if possible.
3. Go on line (try google scholar and specific publication web sites) and search for LCA results and other environmental analysis that might apply to a vehicle made by your company.
4. Using the eco-audit methodology and whatever data you can obtain from the web and other sources estimate the different energy and CO<sub>2</sub> impacts for the different life stages for a typical vehicle for your company.
5. Compare your results with what the company reports. Compare your results with the results for other car companies as reported by others in class.
6. Give a 5 – 10 minute presentation in class.
7. Respond to feedback given to you on your project.
8. Submit a final report on the last day of class.

More detailed issues to look for when reviewing company data will be discussed in class and will be contained in a follow up document.

## **Advanced Graduate Project**

Explore a particular sustainability viewpoint or evaluation method and interpret how it might be applied to an automobile company. Work will be performed in teams of 2 (or possibly one team of 3).

Your team will become the class experts in this subject, reviewing at least 6 major publications, summarizing the major arguments and framework, identifying counter arguments. Provide your evaluation of the validity of this point of view.

Then make suggestions on how (or if) this point of view could be applied to automotive companies. What should they report? How does this compare with what they report now? (ask other students to look for this when they are exploring company reports). Is this kind of data readily available? Be explicit about these comparisons.

Pick this “viewpoint” from list below or suggest your own.

- Ecological limits
- Social aspects
- Triple bottom line (TBL)
- Economics view
- Carbon Disclosure Project (CDP)  
-look at methodology, evaluate success, utility, controversy, accuracy
- Resilience