**One of the required course outcomes for EASC2213 is that “on successful completion of this course students will have an appreciation for social, economic, and environmental considerations related to material selection”. To better achieve this outcome, students will perform some independent research and submit a two page technical memo following the EASC1112 format (same as this memo).**

Students will research a specific material (gas, liquid, solid) and determine:

· the primary locations where the material or the materials used to produce this material are mined or produced.

· the environmental concerns tied to the mining or production of this material.

· the labor or machinery and infrastructure tied to the production and distribution of the material.

· the cost relative to other similar materials or alternative materials on the market.

· the environmental concerns for recycling or reuse of the materials.

· the environmental concerns for using the material (health, safety, byproducts).

You may not find all of these topics so be sure to comment when not available.

A technical memo is written by the student using the EASC1112 Tech Memo format. Papers will be returned without grading if they do not follow the format and all papers must use: Times New Roman, 12 pt font, normal line spacing, 1 inch margins to be accepted. ALL references that are not citable (like many webpages) are attached to the memo as an appendix. Use the appendix number for these citations. Facts referenced outside of the introductory or conclusion paragraph must have citations. The body of the paper must reference the citations and/or appendixes.

Note: A web site is NOT a normal citation but is legitimate if it is a government or business website (avoid academic websites). For these references, print the web page as a pdf and attach as an appendix. You can do this by going to INSERT>OBJECT (text section)>CREATE FROM FILE> select pdf print out of web page.

The paper will present the results of your research and provide a discussion where the topics above are combined into the following three topics in the body of the paper and discussed in sequence.

· Technical Memo header/format, to-from-date-re. (same format as above)

· INTRODUCTION: 1 paragraph overview of the results of your research

· BODY

· Discussion of societal issues tied to production, distribution and use of the material (jobs, general safety of workers, politics/government a concern at production site) based on your research and **NOT YOUR OPINION**. Other’s opinion is fine as long as you cite them.

· Discussion of economic issues: How does the cost compare to other similar materials, is cheap labor used for production compared to where the material is used? Are there any concerns over limited supply and expected cost increases?

· Discussion of environmental issues: toxic, dangerous, flammable, non-recyclable, reusable, by products of production or use are concerns.

· CONCLUSION: Review of your research, similar to introduction.

· LIST OF APPENDIXES

· APPENDIXES

· Citations: a numbered list of references, books & journals

· Web page printouts for government/business website included as an appendix.

**Grading Policy**

Grades are based on a simple A-B-C-D-F scale.

A. Well written and researched, easy reading with good examples for each of the 3 content areas. Follows the required format.

B. A reasonable discussion of the 3 content areas but contains a few errors in formatting, citations, logic, appendixes, etc...

C. A reasonable discussion of the 3 content areas but contains numerous errors in formatting, citations, logic, appendixes, etc...

D. Poor research and discussion, insufficient resources/references, errors in formatting.

F. Paper does not follow the format required, return without grading