**Assignment Overview: Problem-Solution Analysis Outline 5% and *Essay* 15%**

Much of the work that you will do as an engineer centers upon analyzing problems and their solutions. For this assignment, you will select a problem for which engineering has provided a possible solution and analyze the solution in terms of its advantages and disadvantages. You will follow the ‘situation-problem-solution-evaluation’ organizing principle discussed in class.

You have the option for this assignment to work collaboratively with one other classmate or to work individually. Only one final mark will be assigned.

**Step One: Preparation (Some preparation time during class will be provided)**

* Determine whether you want to work alone or with a partner.
* Do some preliminary research (research as an iterative process)
* Select a topic for your essay and inform your instructor by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Gather more information about the identified situation, problem and solution.
* Be sure to consult at least **two academic sources**. (May include additional thoughtfully chosen sources not considered ‘academic’ but *reliable* and *unbiased*.)

**Organize your information and notes into an outline. Due on: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**(See outline rubric for requirements)**

**Step Two: Optional first draft paragraph – unmarked/ for feedback only**

* Once your marked outline has been returned, use it and the comments on it to draft one paragraph of your essay.
* This is an opportunity to use your sources and add researched information to your paragraph for feedback.
* Submit your draft paragraph along with your original outline and the articles consulted. Highlight any paraphrased or quoted sections.
* Your optional paragraph is due no later than: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step Three: Final draft – 15% (to be completed outside of class)**

* Submit a polished draft of your problem-solution analysis
* The requirements for your final draft are as follows:
* 500 words (minimum)
* Includes at least 2 academic sources properly paraphrased or quoted appropriately. (May include additional thoughtfully chosen sources not considered ‘academic’)
* Follows APA formatting guidelines.
* Includes a complete title page and reference list.
* Demonstrates student authorship (no excessive outside help).
* **Your final draft (along with copies of articles consulted with highlighted sections) is due on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Check list for final draft**

* Word process your final draft using the following formatting guidelines:
* Margins should be set at no less than 1” and no greater than 1.5”.
* Typeface should be something readable, such as Times New Roman or Palatino.
* Font size should be no less than 10 pt. (preferably, 12 pt.).
* Text should be consistently double-spaced.
* Page numbers begin in the header of the first page of text with Arabic number 1.
* Include a title page:
* The title should be centered a third of the way down the page.
* Your name, class information and date should follow several lines later.
* For subtitles, end the title line with a colon and place the subtitle on the next line
* Include a list of references formatted according to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ style guidelines.

**Step Four: Working ePortfolio.**

* Upload your marked outline and final draft to your Working ePortfolio.
* Read and provide feedback to one of your peers (min 100 words)

Consider creating a final polished draft of this essay for your Showcase ePortfolio.

**PROBLEM-SOLUTION ANALYSIS: Outline 5%**

Student: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4 = very good – consistently meets and sometimes exceeds requirements**

**3 = good – consistently meets requirements**

**2 = satisfactory – minimally/inconsistently meets requirements**

**1 = weak – needs significant improvement**

1. **Clearly formatted as an outline**

* Standard formal outline (Clear intro – body – conclusion)
* Demonstrates ‘situation-problem-solution-evaluation’ organizing principle

1. **3 2 1**
2. **Comprehensive**

* includes thesis statement main ideas, supporting details and examples
* thesis statement and main points are complete sentences
* supporting details and examples are key words/phrases

1. **3 2 1**
2. **Shows the hierarchical relationship between ideas**

* includes key features of an outline (parallel structure, coordination, division and subordination)
* includes use of roman numerals, capital letters etc

**4 3 2 1**

1. **Researched**

* Evidence of 2 academic sources consulted
* Included some researched support relevant to topic

**4 3 2 1**

**Outline: /16**

**PROBLEM-SOLUTION ANALYSIS: Essay 15%**

Student: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4 = very good – consistently meets and sometimes exceeds requirements**

**3 = good – consistently meets requirements**

**2 = satisfactory – minimally/inconsistently meets requirements**

**1 = weak – needs significant improvement**

|  |
| --- |
| **ORGANIZATION**  **4 3 2 1**   * Includes a well-developed introduction, body and conclusion * Has a clear thesis statement * Includes clear and well-developed topic sentences * Has a clear and appropriate rhetorical pattern (Problem-solution) * Connects ideas logically using mostly appropriate discourse markers (words, phrases and clauses) |
| **CONTENT and DEVELOPMENT**  **4 3 2 1**   * Clear main ideas (evident in topic sentences) * Includes well-developed supporting details: Provides a detailed description of the situation-problem-solution * Provides evidence of some critical evaluation of solution’s advantages and disadvantages * Demonstrates an awareness of audience (instructor) and purpose (including use of impersonal, formal academic English) |
| **RESEARCH SKILLS**  **4 3 2 1**   * Includes appropriate, paraphrased and directly quoted support * Accurately refers to the source when providing support * Has a complete list of references (all with corresponding in-text citations) |
| **GRAMMAR and VOCABULARY**  **4 3 2 1**   * Communicates ideas clearly so that they are mostly understood * Makes mostly precise word choices * Is mostly free of common sentence structure errors and word level grammar errors |

**\*Grading reflects class instruction and emphasis**

**/16**