Assignment: Project Plan

Introduction
The next step in our Design Process is Problem Definition and we will turn it into a Project Plan memorandum. The goal here is to understand the problem more deeply by breaking it down and asking salient questions.

- Why does the system need to have certain characteristics and what do these mean? These are our Design Considerations.
- What does the system need to do? These are its Functions and Systems.
- How does it need to do it? These are the Design Criteria (a.k.a. requirements or constraints).
- What do we need and how will we carry out the project? These are our Resources and Planning.

This paper will eventually become part of your Design Progress Report and Final Design Report.

Resources
Before you begin you must review these resources:
1. EGR 110 Problem Definition – https://sites.up.edu/egr110/design/step2/
2. EGR 110 Communication – https://sites.up.edu/egr110/skills/communication/
   a. Writing Guide for Engineers – see Section IV (page 12-13). This is available on the EGR 110 Communication page

What to Do
1. Prepare a project plan memo (details below) describing the problem you are working on this term.
2. You will need the following four sections. Each section is described below.
   a. Design Considerations
   b. Functions and Systems
   c. Design Criteria
   d. Resources and Planning

How to Do it
The group should prepare a memo describing the Level 1 (wind turbine) project using the format and instructions below as guidance. Only one memo is required for each team. The memo can be written in first-person voice. The maximum length of the memo is 3 full pages (attachments can be on additional pages), 12-point font, single-spaced, 1-inch margins. A brief sample memorandum format is shown below, the Writing Guide for Engineers (listed in ‘Resources’ above) has more details.

Evaluation
Here are some questions to ask yourself before you submit your paper:
1. Am I using figures and tables to help my descriptions? Have I labeled any figures or tables with captions and called them out in the text?
2. Do I have page numbers?
3. Do I have headings and sub-headings for each section and sub-section?
4. Do I have an APA-style bibliography with APA-style in-text citations?
5. Are my sentences clear, concise, and concrete? Do they form paragraphs that cover one topic each? Do the sentences and paragraphs flow from one idea to the next?

Here is an example rubric that may be used to evaluate your paper:

<table>
<thead>
<tr>
<th>Writing</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spelling and Grammar</td>
<td>5 = excellent, complete, with no errors</td>
</tr>
<tr>
<td>Flow and Cohesiveness</td>
<td>4 = great, thorough, few errors</td>
</tr>
<tr>
<td>Depth and Focus</td>
<td>3 = adequate, detailed, some errors</td>
</tr>
<tr>
<td>Sources and Citations</td>
<td>2 = mediocre, vague, many errors</td>
</tr>
<tr>
<td>Formatting</td>
<td>1 = unacceptable, incomplete, blatant errors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Content Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Considerations</td>
</tr>
<tr>
<td>Design Criteria</td>
</tr>
<tr>
<td>Functions and Systems</td>
</tr>
<tr>
<td>Resources and Planning</td>
</tr>
</tbody>
</table>

**Sample Format**

```
University of Portland
DONALD P. SHILEY SCHOOL OF ENGINEERING
MEMORANDUM

DATE: Current Date
TO: Dr. Who
FROM: Team XX: name 1, name 2, name 3, etc.
SUBJECT: Project Plan for EGR 110 Design Project

First Paragraph: Identify your team and team members. Give purpose and intent of memo (why are you writing this memo to me). Give scope of memo (what will the memo cover).

Middle Paragraphs: Body of memo.
  - Identify the project your team is working on. Briefly provide some context of the problem and what significance it has.
  - Describe in some detail the design considerations for your project. Be sure to particularly discuss the environmental, societal, and ethical aspects of the project. Include other considerations that you think are relevant.
  - Describe in some detail the functions your system will perform and what subsystems you will likely need in the device.
  - Describe in some detail the criteria that will be used to select design alternatives.
  - Describe in some detail the resources your project will need and the plan your team has for completing it.

Last Paragraph: Summary of memo.

Attachments: Optionally you can include figures, sketches, tables, etc. This can extend beyond the suggested three-page limit.
```