Design Project Description for Publication

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Assignment

Write a short description summarizing your design project and include an illustration in a separate file. A project description is a summary of your work and provides an overview to the reader. It states the purpose, method, and findings of your project. Any reader, with or without an engineering background, should be able to understand your goals. Because your project is unfinished at the time you are writing your description, you will not be able to report all of the results.

Your assignment consists of the following:

1. A project description and a caption for your illustration in a Word file uploaded to the course “2015 2016 Design Program” in Blackboard

2. An original illustration in a separate file uploaded to the course “2015 2016 Design Program” in to Blackboard

**Content**

The description must make sense standing by itself. In no more than 200 words and no less than 125 words, state clearly:

* The need/requirement or problem being addressed
* The overall goal – what the project is to accomplish
* The main elements of the project design or solution
* The advantages over previous or existing solutions
* The results intended or anticipated – You won’t have completed your project so you cannot report on the actual results

## Publication

The School of Engineering will publish an annual booklet containing each team’s project description. Your team’s project description with your names and your sponsors’ names will be published in the Engineering School’s annual booklet.

This publication provides a way for you to promote yourself and your work and to represent Vanderbilt. You may include it in your portfolio when interviewing for a job or applying for graduate school.

The piece is also mailed to engineering leaders, industry representatives, alumni, entrepreneurs, and research and clinical faculty to inform them about the program and your undergraduate achievements. Because this publication is so important for you and for Vanderbilt, submit your best work.

**Style requirements of the project description**

Here are some guidelines:

* Word file
* Font: Arial
* Font size: 12
* Concise project title – Avoid noun stacking (stringing four or more nouns together can be confusing). Example to avoid: End Effector Explosion Device Disarmament
* Narrative style

**Person**

Use mostly third person but if necessary, you may occasionally use first person. Third person means that you mostly avoid personal pronouns and use pronouns such as “they” and “he, she, or it.” First person means using words like “we” or “our.” It is acceptable to refer sometimes to your team as “we” or “our team.”

These are third person examples:

The team designed and tested a hybrid printer.

The goal was to increase efficiency.

First person examples:

We measured the forces using force sensing resistors.

Our team optimized traffic flow at the intersection.

Our major concern was to avoid lost or corrupted data.

**Voice**

Prefer the active voice whenever possible. It will enliven or activate your writing.

Avoid unnecessary passive voice. Passive voice dilutes the action by weakening the verb, increasing wordiness, and delaying the meaning.

Examples:
Passive: Completion of a reliable rocket system was accomplished by the aerospace team.

Active:The aerospace team completed a reliable rocket system.

**Tense**

Use past and present tense appropriately. Use past tense verbs for your completed work. Use present tense verbs for current work. There is usually no need for future tense.

Examples of past tense:

1. Our team **designed** a novel cryogenic injection system.

2. The model **showed** that the extraction rate **increased** when the temperature **increased** by 5 degrees C.

Example of present tense:

 Work **continues** on the canoe project.

Example of present progressive tense:

1. We **are testing** two different memory devices to determine which is more resistant to radiation.

2. The next step **is optimizing** the gear ratio to improve widget efficiency

One problem to watch for is shifting verb tense unnecessarily. Use past tense to describe action that is already completed, that is, to describe what you have done thus far.

**4 C’s**

Make your description readable. Remember the four C’s:

**Complete**: Cover all major parts of the project

**Concise**: Be brief. Avoid wordiness or unnecessary
 information

**Clear**: Write for the reader, not yourself

**Cohesive**: Create text to flow easily from one idea to
another

**Questions to answer for creating content**

Write answers to these questions as a basis for your description:

1. What is the context of the problem or need, and why is it important?

 Describe briefly the science behind or significance of the research.

2. What is the problem or question, that is, the purpose of your project?

 State the problem or goal of your research.

3. What is your overall approach to solve the problem or address the question?

 Summarize briefly the components of your design solution.

4. What are the expected advantages over previous/existing solutions?

 If applicable, summarize any improvements your design offers.

5. What do you expect your solution (or invention) to achieve?

 Describe the expected function in specific terms.

**Submission requirements**

Upload to Blackboard two files by the deadline announced by your instructor: the project description and illustration caption in a Word file and the illustration in a separate file.

# Illustration requirements

Include an illustration of your design project, following these guidelines:

* Separate file: jpg, tif, gif, eps, png format
* Original illustration (high resolution photo, drawing, schematic, etc., but no clipart)
* No pictures of your group unless shown working on the design project, which should be the emphasis
* Details and text labels easily read if printed at 8 centimeters by 4 centimeters
* A specific caption that stands alone and explains the illustration without relying on the text

# Tutorial video

Review instructions for this assignment by viewing the tutorial video at http://engineering.vanderbilt.edu/design-day/instructions.php.