## **Viable Design Report Rubric - Pair**

**EDD 104 Section #:** \_\_\_\_\_\_\_

**Project #:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Project Name:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Viable Design Name and #:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## **Member 1:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Subtotal: \_\_\_\_/55**

**Cover Page:**

\_\_\_ (1) EDD 104, Section #, Project # and Name, Viable Design # and Name, Pair/Trio Names

**Table of Contents:**

\_\_\_ (1) Uses the same font, Times New Roman 12 pt, throughout the entire report

\_\_\_ (2) Connects the listed items accurately to the first page numbers of any section, for example, “Introduction…………..1”.

**Design Statement:**

\_\_\_ (1) Exactly as given in Project Description

**Introduction/Background:**

\_\_\_ (15) Introduces the project by explaining the context/background and motivation for the project. This means you must provide at least one page of text explaining what the product is, how it is currently used, and how the team conceives of modifying/re-designing it to meet the Design Statement. This also means there should be a brief discussion of the 3 alternative designs and why these were chosen. Then, focus on this pair’s particular design and explain how you envision it will look and function in brief. Write in language that can be understood by someone with no prior knowledge of the project. **(minimum of 1 page of writing)**

**APA Format:**

\_\_\_ (10) In-text citations in proper APA format for your sections of report.

\_\_\_ (10) **Reference Page in proper APA format**. Each team member will create a list of references that you personally used in researching and writing about your sections of the report, including your part of the Viable Design Description. The references will be in correct and complete APA format, in alphabetical order by last name of first author or source. Each team member will put his/her name above these References, e.g., John Smith’s References. Then, have your references. When you are done, the next Team member will put their name and have their references. Have one (1) Reference Page(s), but have sections for each pair/trio’s member’s reference list as just described.

**Appendix B: Cost Analysis**

\_\_\_ (10) Each team member will research the cost of materials and estimate the cost of manufacturing of the components or parts relevant to the criteria that you are writing about. Make a convincing case for how much you expect each part/feature to cost based on existing technology/materials etc. Have reliable sources—although these may not be scholarly. Separate the sections of Appendix B by member so that a reader knows who researched/wrote which section. **(minimum of 1 page of writing)**

**Conventions and Language:**

\_\_\_ (5) Demonstrates thorough control of English language conventions with essentially no errors in syntax, spelling, grammar and punctuation.

## **Member 2:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Total: \_\_\_\_/ 55**

**Design Focus:**

\_\_\_ (10) Show the Evaluation Criteria with assigned weights and criteria justifications. This means, cut and paste your Pahl & Beitz matrix and Criteria Justification statement at the top of this section first. Then, provide a more expanded discussion/explanation as to why the team chose these criteria and why each was given the weight it was within the larger context of the project. Explain how the criteria are relevant to your particular Design alternative. **(minimum of 1/2 page of writing in addition to P&B Matrix and existing Criteria Justification)**

**Makes the schematic of your proposed device**

\_\_\_\_(5) Have schematic drawing of your anticipated design with labels for key parts, colored arrows showing movement of materials/energy in and out. This is a schematic for your anticipated device, not the device as it currently exists so show modifications/changes. You can do this in collaboration with your partner, but you are responsible for making sure it is complete and clear.

**Conclusion:**

\_\_\_ (5) Summarize key aspects of this particular design alternative and relate it back to Design Statement. This is your opportunity to “sell” your particular alternative design as the best solution. Explain (use references to sources, diagrams/pictures) why your design will function the best and meet requirements. It should be a summing-up, not merely a re-hash. **(minimum of 1/2 page of writing)**

**APA Format:**

\_\_\_ (10) In-text citations in proper APA format for your sections of report.

\_\_\_ (10) **Reference Page in proper APA format**. Each team member will create a list of references that you personally used in researching and writing about your sections of the report, including your part of the Viable Design Description. The references will be in correct and complete APA format, in alphabetical order by last name of first author or source. Each team member will put his/her name above these References, e.g., John Smith’s References. Then, have your references. When you are done, the next Team member will put their name and have their references. Have one (1) Reference Page(s), but have sections for each pair/trio’s member’s reference list as just described.

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**Conventions and Language:**

\_\_\_ (5) Demonstrates thorough control of English language conventions with essentially no errors in syntax, spelling, grammar and punctuation.

## **All Pair Members:**

**All team members will contribute to the Viable Design Solution. Each member will prepare at least two sections of the report and discuss in the Viable Design Solution section will discuss at least two (2) criteria, explaining how you and your partner conceive of this alternative design, i.e., how it will work, how it will look, what its size is, what it will be made of; this should amount to 3 full-pages of writing (including research and analysis, with in-text citations) at a minimum. Pictures, diagrams, CAD drawings, and a Schematic must be used, but these elements will not count towards the page minimum.**

**Viable Design Description: Team Member 1 \_\_\_\_\_\_\_\_\_/40 (minimum of 1 page of writing)**

\_\_\_ (10) Use a functional schematic and other visuals to give a thorough description of the overall design and its main parts/features/functions (this can/should be the same as your partner’s—only one functional schematic).

\_\_\_ (10) Highlight what Evaluation Criteria different design parts/features/functions address. Organize by part/feature/function or by Evaluation Criteria those sections assigned to you.

\_\_\_ (10) Clearly show how you expect your design to meet ALL the requirements. Reference the requirements in Appendix A.

\_\_\_ (10) Refer to requirements, cost analysis and other supporting documents in appendices. Back up your design choices by referencing materials and using in-text citations.

**Viable Design Description: Team Member 2 \_\_\_\_\_\_\_\_\_/40 (minimum of 1 page of writing)**

\_\_\_ (10) Use a functional schematic and other visuals to give a thorough description of the overall design and its main parts/features/functions (this can/should be the same as your partner’s—only one functional schematic).

\_\_\_ (10) Highlight what Evaluation Criteria different design parts/features/functions address. Organize by part/feature/function or by Evaluation Criteria those sections assigned to you.

\_\_\_ (10) Clearly show how you expect your design to meet ALL the requirements. Reference the requirements in Appendix A.

\_\_\_ (10) Refer to requirements, cost analysis and other supporting documents in appendices. Back up your design choices by referencing materials and using in-text citations.

**THE VIABLE DESIGN DESCRIPTION IS ONE SECTION WITH DIFFERENT SUB-HEADINGS—each member should write at least 2 sub-heading sections and put your name next to the title of the sub-heading you wrote, e.g. Design for Water Spout (John Smith).**

**Formatting: Both Pair Members\_\_\_\_\_\_\_/5**

\_\_\_ (1) Page format: 1-inch margins top, bottom, left and right. Entire report, including TOC, cover, Appendices, References and page numbers are in 12- point, Times New Roman font

\_\_\_ (1) Headings only should be bold, no space between heading and text

\_\_\_ (1) Single space paragraphs; double space between paragraphs, do not indent

\_\_\_ (1) Page number at bottom right of every page;

\_\_\_ (1) Documents are in the order outlined in the guidelines.

**TEAM MEMBER 1: TOTAL SCORE \_\_\_\_\_\_\_\_\_\_\_\_\_\_/100**

**TEAM MEMBER 2: TOTAL SCORE \_\_\_\_\_\_\_\_\_\_\_\_\_\_/100**