

Engineering Design Process Portfolio Rubric

Component I: Identifying, Articulating, and Justifying a Problem

Element A: Identification and definition of the problem

Element B: *Justification of the problem*

Element C: *Documentation and analysis of past and current solution attempts*

Element D: *Identification, definition, and justification of solution design goals, parameters and constraints*

Component II: Generating an Original Solution

Element E: *Demonstration of design process thinking and analysis*

Element F: *Application of mathematics, science, and engineering principles*

Element G: *Demonstration of design viability*

Component III: Constructing a Testable Prototype or Process

Element H: *Demonstration of sufficiency of prototype design process*

Element I: *Demonstration of sufficiency of final prototype iteration*

Element J: *Demonstration of sufficiency of testing*

Component IV: Analyzing Test Data

Element K: *Analysis of the design based on testing*

Element L: *Documentation of end user and stakeholder evaluation (external evaluation)*

Component V: Reflecting and Formulating Recommendations

Element M: *Reflection on the project design*

Element N: *Presentation of designer's recommendations*

Component VI: Documenting and Presenting the Project

Element O: Presentation of the project portfolio

Element P: Writing like an Engineer