- **(C): an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability**

Design Component	Unsatisfactory	Marginal	Satisfactory	Outstanding
Design goal	Is vague or does not understand goal of design	Can state design goal and break into subcomponents	Thorough understanding of design goal and subcomponents. Can state trade-offs.	Full understanding of all aspects of design goal and trade-offs
Design process	Has to be led through process with a "recipe". Little or no effort in optimization and exploration of trade-offs	Completes design with some effort toward optimization and consideration of trade-offs	Completes design and includes optimization and trade-offs in design	Completes design showing creative use of optimization and trade-offs. Extends design beyond original goal
Design demonstration	No analysis of design robustness or impact of realistic constraints. Unable to perform error analysis or demonstrate design successfully meets goal.	Some analysis of design robustness and impact of realistic constraints. Makes effort to demonstrate successful realization of design goal.	Demonstrates design robustness in presence of realistic constraints. Presents analysis demonstrating successful realization of design goal	Full analysis of design robustness and successful realization of design goal in presence of realistic constraints. Extends analysis to larger class of designs.