

ENGR 310
Alternatives Evaluation Assignment

You should be coming to a pretty strong understanding of what your design must accomplish. It's now time to start thinking about specific solutions or design ideas. Many people believe that you are born creative or not. But the fact is everyone can learn to be creative! In class we will learn a couple of techniques for generating creative solutions to problems (there are many more!) with the expectation that you will apply them to your projects.

Remember that, in design, rarely is your first idea the best idea. Successful designers work hard to generate numerous potential solutions to any given design problem. They then evaluate them according to customer-driven criteria generated in the problem definition phase, which provides guidance to the next phase. Often, we learn some things that cause us to rethink our initial understanding of the problem.

Your next assignment is to apply two formal creativity techniques, in addition to group brainstorming, to your project to generate a set of potential conceptual design ideas. Under the appropriate tab in your binder, include the following:

1. Set of alternatives – Your 4-6 best design alternatives, with appropriate representations of each (e.g., labeled sketch, drawing, or 3D CAD model). The alternatives should be distinct, not variations of one another. Your journals should reflect how you came up with these ideas.
2. Evaluation criteria – The set of criteria that you will use to evaluate the design alternatives. These will be drawn primarily from your objectives and constraints.
3. Evaluation matrix – An evaluation matrix of the alternatives, comparing each alternative to a datum, and your conclusions from it.

This assignment is due the day before your recitation during the week of March 3.