

1. What is design?

Design deduces the plan to unleash the desired objectivity from a given product/article to be developed. The desired objectivity includes the operational elements of durability, reliability, and operational performance in each environment.

2. How does material selection fit into the design process?

Personally, before the course, the material selection was my least priority when it comes to a given design event. I have worked with the Product Development division and V&V division of Fiat Chrysler. I gave zero to tiny heed to materials in each design process. But over the course, my perspective has evolved.

Now, rather than considering material selection as an external process. It is more of a process that needs to be worked upon simultaneously and holds a central theme. Altogether it gets essential if you plan to include the elements of 'Comprehensive Design' in your given design/product.

In my opinion, working with material selection as a horizontal integration rather than a vertical integration in the entire design process would undoubtedly save a lot of time.

Material selection is essential in a given design process, moment the operational constraints and performance requirements from a given product/design/article are laid. The material selection process is one of the critical functions, which ensures that a given product serves the intended life cycle and also crucial for product life-cycle management activities.

3. What properties/attributes are important for selecting a material?

- Functional Requirements
- Objective
- Material Indices
- Density of the Material
- Youngs Modulus
- Shape Factor
- Constraints (Technical/Quality/Production)
- Working/Operational Environment
- Sustainable Material options
- Non-conventional Material Alternatives

Look at what you submitted for the initial introduction activity (Assignment 1). **Has your prospective changed on materials and design?**

Yes, Definitely the prospective to look out for the materials and design has changed and redefined. Rather than looking at them as different entities in a given Engineering Design process, now for me they are, moreover, the processes which work in tandem with each other.