



INDRAPRASTHA INSTITUTE of
INFORMATION TECHNOLOGY DELHI

Design Paradigm



A course on electronic system design imperatives



narang n. kishor,
mentor & principal design architect
narnix technolabs pvt. ltd.

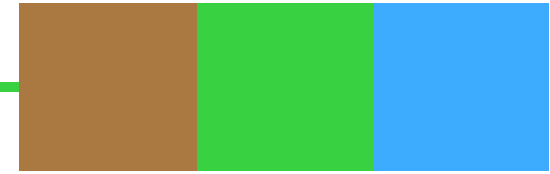
Design Paradigm...



One of the critical components of the product realization process is the engineering design, which deserves a special attention in the engineering education to better prepare engineers to meet the demands of the industry.



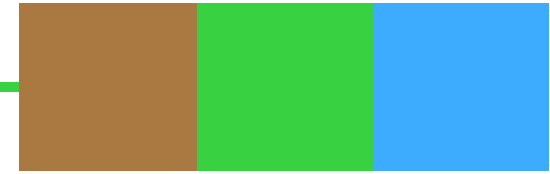
Evolution of Design Paradigm..



The evolution of a design paradigm in Engineering curriculum is based on integration of a number of design experiences into theoretical courses and the design-specific courses. This approach is imperative to enhance the employability of Engineering Students in the industry by virtue of filling the wide gap between the Theoretical Aspects of Learning in the Indian Education System and the Practical Applications of the concepts learnt in college, which are essential for employment in the industry.



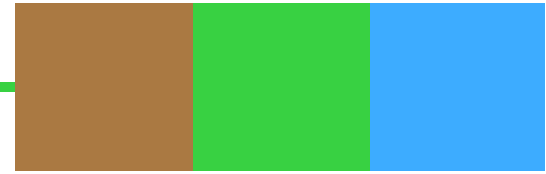
The Course Objective:



The course is intended to address the vital gap in the fundamentals taught and their applications in Product/System Realization thru the understanding of the Design Paradigms. It leverages all the theoretical learnings and introduces the students to the vast applications of the concepts learnt thru the exposure to an approach to the Integration of comprehensive design experience with the Engineering Curriculum.



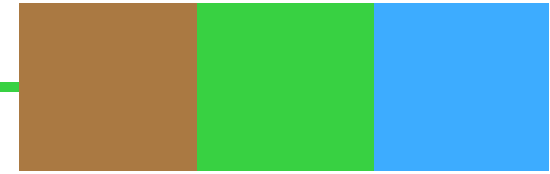
What is Design ? ? ?



Design is the practice of intentional creation to enhance the world. It is a field of doing and making, creating great products and services that fit human needs, that delight and inform. Design is exciting because it calls upon the arts and humanities, the social, physical, and biological sciences, engineering and business.




Design Thinking ! ! !




Design thinking comprises strategies for finding and solving problems by bringing an understanding of people and society to technology design, focusing upon finding the correct problem before rushing to a solution. We believe that design thinking skills will be a key success factor for a new generation of creative leaders in technology, business, and education.






But design faces an uncertain future. The traditional design fields create artifacts. But new societal challenges, cultural values, and technological opportunities require new skills. Design today is more human-centered and more social, more rooted in technology and science than ever before. Moreover, there is need for services and processes that do not require the great craft skills that are the primary outcome of a design education.





Although design can sometimes bring creative insight to new problems, this ability is more of an art than a science, limited to a few especially talented individuals and design firms. In order to expand beyond chance successes, design needs better tools and methods, more theory, more analytical techniques, and more understanding of how art and science, technology and people, theory and practice can commingle effectively and productively.






Design has the capability to lead because it cuts across all disciplines. Design is transformative because of four major characteristics:

- ⇒ Design Thinking: ensuring that the correct problem is being solved.
- ⇒ Systems Thinking: cutting across and encompassing all disciplines.
- ⇒ Integrative: blending of practice and theory.
- ⇒ Human-centered: assuring that people and technology work harmoniously as collaborative players.






⇒ If design is to live up to its promise, it must create new, enduring curricula for design education that merge science & technology, art & business, and indeed, all the knowledge of a university.

⇒ In earlier years, designers were trained in form, function, materials, and aesthetics. Today, culture and emotions are central, plus knowledge of societal issues, techniques for subtle persuasion, and the intricacies of complex, interdependent systems.

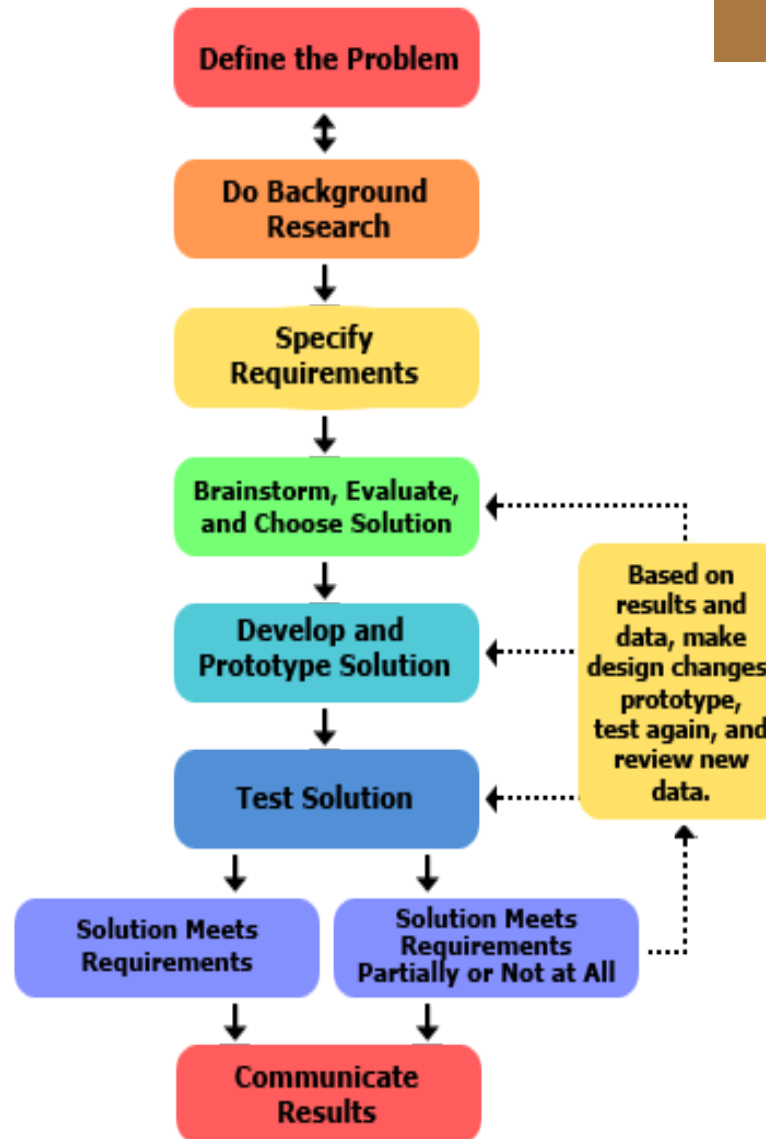
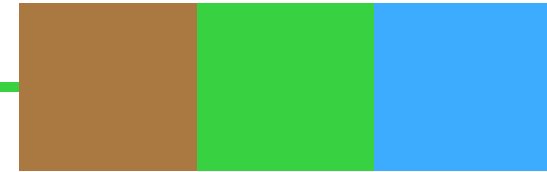




Design is a field of doers and makers. In the practical world, successful products and services require generalists who can cut horizontally across many of the deep, vertical specialties. Generalists cannot succeed without close collaboration with specialists, while the knowledge of a specialty is too limited to create an effective service or product for people without the aid of design generalists.



10 Step Design Process





*design is our religion
&
we are fanatically religious*



narnix

narnix technolabs

narang n. kishor
+91 9810163990
kishor@narnix.com

your technology interface



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