Proposal for starting Bachelor of Technology in Design at IIT Delhi

Preamble

Design has enormous impact on human lives and is a vehicle for social and economic progress of any country. Keeping this in mind, IIT Delhi has started a new Department of Design which came into existence more than a year back. One of the mandates of the department is to start Bachelors programme in Design. The faculty of Department of Design met multiple times and had wide consultation with experts and stakeholders to arrive at curricula for following two Bachelor programmes in Design.

- Bachelor of Technology in Design
- Bachelor of Design (B.Des.)

Whereas B.Des. is a Bachelors programme with a strong disciplinary focus open to UCEED qualified students of all areas (including arts, commerce etc.), the B.Tech. programme in Design is somewhat broad based programme with somewhat inter-disciplinary and trans-disciplinary focus analogous to other B.Tech. programmes of the institute. B.Tech.(design) will admit students based on JEE advanced ranks.

Objectives

The proposed curricula for B.Tech. (Design) incorporate recommendations of concept note accepted by Board of Governors of IIT Delhi which led to formation of Department of Design. Some relevant recommendations of the concept note are highlighted below for completeness.

- IIT Delhi is an institute of technology with large number of departments/centers/schools specializing in science, engineering, management, social sciences and policy. Being a part of this larger ecosystem B.Tech. programme in Design and curricula is expected to harness existing strengths of the institutes. Design and innovation activities across the institute require strong design ecosystem to succeed. Similarly the intellectual roots of design which extend into the arts, humanities, sciences, engineering and management contribute to the theory and practice of design enabling stronger inter-disciplinary collaborations. Keeping this in mind B.Tech. Programmein Design would like to offer courses withabout half of the courses belonging to core discipline of design and rest coming from other departments, centers and schools (similar to other B.Tech. programmes). Curricula will pave the way for easy collaboration and partnerships to happen between Design department and other departments/centers/schools.
- Today's designers require a new kind of training that goes beyond the traditional apprenticeship and practice-based programs associated with most academic design programs in the past. Designers are not mere service providers but now often hold senior-level management positions in industries and elsewhere. Design has come to play an important role in the strategic planning of corporations, plans for innovation and development of new products and solutions in particular. In other words design is now central to many major corporations and encompasses more than the issues, technologies, and agents involved in creating and using products, artifacts, processes, and built spaces. Design education in the past has put too much emphasis on either skills only or on thought process only. Many industries now look for people with combination, and desire to hire students

with great aptitude who are very good at acquiring new skills and also adapting their existing skills to the new requirements of any given job. Top design schools across the world have gone through this transformation in recent times and made necessary changes in curricula to address this.

- The expectation is that the students who graduate with Bachelor of Technology in Design degree from IIT Delhi would take up,in the long run leadership positions in industry, academia, government, consulting and entrepreneurship. The program offers enough choices and freedom for students to exercise diverse career paths. As the proposed curriculum is geared to prepare students for leadership positions, it is a broad based and is analogous to existing programmes of IIT Delhi. The approach of IIT Delhi would be to create new leaders in design who can see big picture as generalists and have ability to go into details as a design specialist does.
- B.Tech. (Design) programme at IIT Delhi will have strong product design focus. However, in today's fast changing world design of products in isolation has limited meaning and is often accompanied by design of environments, communications, systems and services. The programme will prepare students who at the end of programme are confident to use design as a vehicle to address problems of industry and society adopting an approach of *define, ideate, visualize, generate, iterate and refine*. The latter two namely *iterate* and *refine* calls for students to have adequate skills to build functional prototypes, test with users and stakeholders and to refine the product and solutions.
- Design as a body of tacit knowledge has always been present in society since time immemorial. It is this body of tacit knowledge that artisan groups shared and evolved over generations of practice. However, with advent of technology being a powerful tool to improve quality of life and greater adoption of science and scientific ways in society, successively, greater emphasis has been laid on systematic discovery and understanding of natural phenomena than encouragement for individualistic and creative leaps to address a perceived design problem. B.Tech. programme in Design would like to incorporate this aspect too in its curricula.
- With changing times, design education in India needs to evolve to the next level to meet the expectations of both the learner and the industry. The challenge is to move to a more holistic, multi-disciplinary design education to create design professionals who can position design more strategically as an integration of the aesthetic, business, technological and sociological concerns. Through its courses and projects the proposed B.Tech. programme will try to give an opportunity for students to experience all stages of product realization from need to adoption eitherindividually or working in teams. This calls for more holistic approach to design addressing desirability, feasibility and viability.
- Human needs are continuously changing in the present dynamic complex and interconnected world. Technology has taken over and influencing our lives more than ever and is rapidly transforming the world around us. Adoption of technology is becoming fast and inexpensive, changing the way we live, work, consume and relate to each other. Design is expected to respond to these needs of people who are willing to embrace complexity highlighting a greater need for humanizing technology. The proposed curriculum is a step in this direction. In this context institutes and universities which have many faculties other than design have an advantage. Even stand-alone design schools and institutes are forging collaboration with tech schools and universities and making necessary changes in their curricula to address this problem.