Post-graduate Research Centre for Industrial Design

OPEN DESIGN SCHOOL

37th Faculty Development Program (FDP)

Design Engineering (3rd + 4th + 5th + 6th Semester)

Date:20, 21, 22, 23August 2016 (37thFDP)

Venue: Room No. 131, ACPC Building, GTU Innovation Council, L.D. Engineering College, Ahmedabad.

Time: 10.00 am to 5.00 pm; Everyday

Kindly register here: https://goo.gl/forms/9Q6PsFJYobrKpOcw1

Message for Principals/ Directors/ HODs: For every group of 30 students, in every Branch, please see that at least one Faculty Member participated in the FDPs at GTU.

GTU introduced courses of Design Engineering through Design Spine, during the academic year 2014-15, beginning from the 3rdsemester. Design Engineering is a very unique and pioneering initiative of GTU and it is based on **"Design Thinking"** methodologies developed and used by engineers and designers all over the globe. One of the key objectives of this initiative is to infuse the methodology of Design Thinking into the mind-set of the students and the Faculty Members so that it is used in the study of all the core subjects of every branch. Other main objectives include; To stimulus thought process and creativity among the students, To learn problem-solving techniques, To lessen the copy-pasting in the Project work etc.

GTU's Centre for Industrial Design – OPEN DESIGN SCHOOL has taken up the challenge to help implement this course in all the affiliated engineering colleges of GTU. From AY 2014-15,*Centre for Industrial Design* – OPEN DESIGN SCHOOL has organized 36 Faculty Development Programs (FDPs) during the last two years, in which more than 2200 Faculty Members from 111 Engineering colleges across the state, from more than 15 branches, have been trained for Design Thinking.

Now during this semester (AY 2016-17), the Centre is bringing a new set of FDPs for Faculty Members with new hands-on exercises, presentations, examples and techniques of Design Thinking. The revised guidelineseffective from AY 2016-17, published on the GTU website dated 7th July, 2016 (**Link:**http://goo.gl/S5edhq) talk about little change in the approach for projects that students will take from 3rd to 6th semester, but the Design Thinking process would remain same.**This**

FDP will cover the whole Design Thinking process and approach to be taken in the 3rd to 6th semester from basic level, suitable for all the Faculty Members. Those, who have participated in earlier Design Engineering FDPs during the previous semesters, should also participate in this new type of FDPs, as for them parallel session would run for advance learning. Hence the FDP would run in two modules, (1) Level 1 workshop– Basic (2) Level 2 workshop – Advance.

Exclusive features of FDP:

- New set of learning material including PPTs, Videos, Case Studies, Examples etc.
- Hands on exercises designed exclusively for FDPs to understand Design Thinking approach
- Experts session during FDP (Physical interaction or Skype)
- Reverse Engineering & Prototyping techniques

Workshop Program:(Level 1 – Basic)

Day 1:

Session 1 -**Welcome & Orientation session**– Introduction to Design Engineering Course

Session 2 – **Introduction** – What is Design Thinking? Its importance, socio-economic relevance

Session 3 – **Learning Tools to better Learn Design Thinking** – Bio Mimicry, Analogy, Gestalt Modeland Heuristic Approach – All with examples

Session 4 – **Hands on Exercises** – Team Building and Log book

Day 2:

Session 5 - **Empathy** – Observation techniques & Field work

Session 6 – **Field Visit** – To gather observation data

Session 7 – **Summarization of Data** - Analysis of Data gathered during Observations

Session 8 – **Empathy Mapping** – Canvas Preparation

Day 3:

Session 9 – **Ideation** – Brainstorming techniques to Innovation

Session 10 – **Ideation Canvas** – Canvas Preparation

Session 11 – **Product Development** – Form, Function, Features

Session 12 – **Product Development Canvas** – Canvas Preparation

Day 4:

Session 13 – **Reverse Engineering** – Selection of Branch Specific artefact/component/product

Session 14 – **Disassembly & Identify Technical aspects**

Session 15 –**Prototyping& Building the solution**

Session 16 – **Experts Feedback on solution**

Workshop Program: (Level 2 - Advance)

A special advanced level component of FDP is for those who had participated in the earlier Design Engineering FDPs during the previous semesters. The components of the advanced level FDP will run parallel with the Basic level components of the FDP. The participants will be introduced to new tools and techniques and to detailed learning of the various phases of Design Thinking with the aim of refinement beyond what the participants may have learnt in the previous FDPs.

The advanced level component of the workshop shall be a combination of **Design Clinic support & Inputs for Design Thinking process/ tools**, such as, Research, Observation, Analysis, Visualization, Knowledge Management etc., The following points shall be covered,

Day 1: Review of prior learning by Faculty Members who have taken the training previously –

- **Identifying gap areas** and supporting them by process / tools
- Research: **Ethnographic study** for observation & documentation
- Tools – **Mind Mapping, Lotus Blossom**
- Finalization of project as a **Case Study**

Day 2: Project and Clinical support

- Inputs: **Ideation tools like SCAMPER**, Analysis tools

Day 3: Project and Clinical support

- Inputs: **Visualization** Assignment for observation, problem solving, decision making

Day 4: Project and Clinical support

- Inputs: Backward review of the project for each step / stage & tools, understanding gaps and providing support for gap areas

Note:

Certificate will be only issued to the participants upon successfully completing training for all four days. University will not entertain anyone in any case for any institute related or personal work during the period of FDP.

Should you have any query, kindly write us on: design@gtu.edu.in