

OPEN DESIGN SCHOOL



Student Start-up Support System  
(S4)



Gujarat Technological University  
(GTU), Ahmedabad



GTU Innovation Council (GIC)

## Faculty Development Program (FDP) in Design Engineering

For Faculty Members, teaching Design Engineering at 3<sup>rd</sup> and the 5<sup>th</sup> Semesters or for those, planning to teach Design Engineering at 4<sup>th</sup> and the 6<sup>th</sup> semesters

**Date:** 27<sup>th</sup> FDP: 31, 1, 2, 3 September 2015

**Time:** 10.00 am to 5.00 pm; Everyday

**Venue:** 131, ACPC Building,  
GTU Innovation Council (S4-CiC3),  
L.D. Engineering College, Ahmedabad.

Kindly register here: <https://goo.gl/GfNKal>

**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 has introduced six courses of Design Spine in academic year 2014-15 from 3<sup>rd</sup> to 8<sup>th</sup> semester namely “*Design Engineering*”. *GTU’s Centre for Industrial Design – OPEN DESIGN SCHOOL* has taken up the challenge to leverage and help implement this course in all affiliated engineering colleges of GTU. *Centre for Industrial Design – OPEN DESIGN SCHOOL* has successfully organized 22 Faculty Development Program (FDP) during 2014-15, in which 1,500 Faculty Members, from 15 branches from 120 Engineering colleges across the State participated. Now during 2015-16, the Centre is bringing **all new** set of FDPs for Faculty Members of our colleges. **This FDP is suitable for all**

# Post-graduate Research Centre for Industrial Design

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Faculty Members who want to be acquainted with Design Thinking Methodology. The FDP includes many new and interesting topics in an up-dated format.

### Outline for the new FDPs:

Day 1			
Session No.	Time	About	Description
10.00 am – 10.30 am		Registration and Breakfast	
1	10.30 am – 11.00 am	<b>Welcome &amp; Orientation session</b>	<ul style="list-style-type: none"> <li>○ Introduction of Design Spine for 3rd, 4th, 5th Semester to participants</li> <li>○ Overview, objective and goal of this course</li> </ul>
2	11.00 am – 12.30 pm	<b>Introduction of Design Thinking Methodology</b>	<ul style="list-style-type: none"> <li>○ What is Design Thinking? Its importance, socio-economical relevance</li> <li>○ Design thinking to foster innovation</li> <li>○ Systematic problem identification process</li> <li>○ Systematic problem solving approaches</li> </ul>
3	12.30 pm – 1.30 pm	<b>Learning tools - Design Thinking</b>	<ul style="list-style-type: none"> <li>○ Design in Nature/Bio-mimicry</li> <li>○ Design as a System approach</li> <li>○ Design as listening tool for mapping users' unarticulated needs</li> <li>○ Learning by analogy, artefactual, heuristic and gestalt model</li> </ul>
1.30 pm – 2.00 pm		Lunch Break	
4	2.00 pm – 3.00 pm	<b>Hands on exercises</b>	<ul style="list-style-type: none"> <li>○ Team Building, Domain Selection (Society/Industry project)</li> <li>○ Log book, documentation strategy – introduction, importance, preparation</li> </ul>
5	3.00 pm – 5.00 pm	<b>Observation Technique(AEIOU)</b>	<ul style="list-style-type: none"> <li>○ Orientation to Field Work – Need for field visit? What/How/Where to Observe</li> <li>○ Ethnographic tools and its usage</li> <li>○ Key pain and pleasure points</li> <li>○ Understanding of User Contexts</li> <li>○ Log book exercise on field</li> </ul>

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Day 2			
Session No.	Time	About	Description
10.00 am – 10.15 am		Breakfast	
6	10.15 am – 10.30 am	<b>Discussion on Day 1 activity</b>	<ul style="list-style-type: none"> <li>○ Common Discussion on Importance of Design Thinking and Observation</li> </ul>
7	10.30 am – 1.30 pm	<b>Field Activity</b>	<ul style="list-style-type: none"> <li>○ Team will visit their domain/place of work for getting insights and define problems.</li> </ul>
1.30 pm – 2.00 pm		Lunch Break	
8	2.00 pm – 3.00 pm	<b>Summarization and data analysis</b>	<ul style="list-style-type: none"> <li>○ Analysis of Data - Mind Mapping tool</li> </ul>
9	3.00 pm – 5.00 pm	<b>Canvas Preparation activities</b>	<ul style="list-style-type: none"> <li>○ Summary of AEIOU activity/inputs</li> <li>○ Preparation of Empathy Mapping</li> </ul>

Day 3			
Session No.	Time	About	Description
10.00 am – 10.30 am		Breakfast	
10	10.30 am – 12.00 pm	<b>Problem Definition</b>	<ul style="list-style-type: none"> <li>○ Secondary research/Prior art search</li> <li>○ Diachronic and Synchronic analysis</li> <li>○ Group wise presentation followed by Discussion</li> <li>○ Verification of problem identified by team through users/stakeholders</li> </ul>
11	12.00 am – 1.30 pm	<b>Canvas : Ideation</b>	<ul style="list-style-type: none"> <li>○ Explanation of Ideation activity and how it will magically affect whole Design experience, combination of Ideas, brainstorming, Opportunity mapping</li> </ul>
1.30 pm – 2.00 pm		Lunch Break	
12	2.00 pm – 3.00 pm	<b>Preparation of Ideation Canvas</b>	Team wise Canvas filling activity

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13	3.00 pm – 4.00 pm	<b>Canvas : Product Development</b>	Towards <i>Evaluation of Idea</i> activity. Team will identify/refine their purpose and make design for their product/system/process
14	4.00 pm – 5.00 pm	<b>Preparation of PD canvas</b>	Team wise canvas filling activity

Day 4			
10.00 am – 10.30 am		Breakfast	
15	10.30 am – 11.00 am	<b>Customer Revalidation</b>	Group discussion for revalidation
16	11.00 am – 12.30 pm	<b>Pre-design &amp; Dirty Mock-ups</b>	Find out Learning Needs to complete the project, distribute learning needs among group members, timeline it and prepare LNM
17	12.30 pm – 1.30 pm	<b>Design for Performance, Safety and Reliability</b>	Participants will be introduced different aspects of design for performance, safety and reliability
1.30 pm – 2.00 pm		Lunch Break	
18	2.00 pm – 3.00 pm	<b>Design for Ergonomics and Aesthetics</b>	How Ergonomics and Aesthetics aspects will raise the value of products?
19	3.00 pm – 4.00 pm	<b>Design for Manufacturability &amp; Assembly (DFMA)</b>	Different considerations and guidelines to be followed for DFMA
20	4.00 pm – 5.00 pm	<b>Design for Cost, Environment</b>	Cost and environment could play major role in Product design and Sustainability
5.00 pm onwards		Valedictory Function	

Should you have any query, kindly write to us at: [design@gtu.edu.in](mailto:design@gtu.edu.in)

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### References for Previous FDPs:

- Invitation for registering for the 23<sup>rd</sup> or the 24<sup>th</sup> FDPs, scheduled on 30<sup>th</sup> July to 2<sup>nd</sup> Aug and from 4<sup>th</sup> to 7<sup>th</sup> Aug 2015 at [http://files.gtu.ac.in/circulars/15Jul/28072015\\_11.pdf](http://files.gtu.ac.in/circulars/15Jul/28072015_11.pdf)
- Invitation for registering for the 25<sup>th</sup> FDP, scheduled from 11<sup>th</sup> to 14<sup>th</sup> Aug 2015 at [http://files.gtu.ac.in/circulars/15Jul/31012015\\_03.pdf](http://files.gtu.ac.in/circulars/15Jul/31012015_03.pdf)
- Invitation for registering for the 26<sup>th</sup> FDP, scheduled from 25<sup>th</sup> to 28<sup>th</sup> Aug 2015 at [http://files.gtu.ac.in/circulars/15Aug/11082015\\_02.pdf](http://files.gtu.ac.in/circulars/15Aug/11082015_02.pdf)

### References for Guidelines:

- Guidelines for DE-1A (3<sup>rd</sup> Semester) may be found at: [http://gtu.ac.in/circulars/15June/19062015\\_01.pdf](http://gtu.ac.in/circulars/15June/19062015_01.pdf)
- Guidelines for DE-2A (5<sup>th</sup> Semester) may be found at: [http://gtu.ac.in/circulars/15June/26062015\\_12.pdf](http://gtu.ac.in/circulars/15June/26062015_12.pdf)