

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:** 29<sup>th</sup> FDP: 12, 13, 14, 15 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/EPjxdZ>

**IMPORTANT MESSAGE:** GTU's Design Team met representatives from universities from Japan, Korea, Singapore, China, Vietnam, Cambodia, Indonesia, Thailand, Malaysia, Laos, Philippines, Brunei and Myanmar on 6<sup>th</sup> June at a meeting of APEN. All these 13 universities are working on introducing Design Thinking and Project-based learning in their syllabi.

On 20<sup>th</sup> - 22<sup>nd</sup> August 2015, the Design Team participated in the 3-Day Workshop: 'Exposure to Product Design and Innovation' at IDC, IIT Bombay.

Many interesting ideas from the two inter-actions have been introduced in the FDPs, being organized by the Open Design School.

**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

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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 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	

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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> </ul>

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>
		<ul style="list-style-type: none"> <li>○ Log book exercise on field</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>

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11	12.00 am – 1.30 pm	<b>Canvas : Ideation</b>	○ Explanation of Ideation activity and how it will magically affect whole Design experience, combination of Ideas, brainstorming, Opportunity mapping
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
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

<b>Day 4</b>			
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		<b>Valedictory Function</b>	

# Post-graduate Research Centre for Industrial Design

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

### 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)
- Invitation for registering for the 27<sup>th</sup> FDP, scheduled from 31<sup>st</sup> to 3<sup>rd</sup> Sept 2015 at [http://files.gtu.ac.in/circulars/15Aug/24082015\\_01.pdf](http://files.gtu.ac.in/circulars/15Aug/24082015_01.pdf)
- Invitation for registering for the 28<sup>th</sup> FDP, scheduled from 7<sup>th</sup> to 10<sup>th</sup> Sept 2015 at [http://files.gtu.ac.in/circulars/15Aug/31082015\\_02.pdf](http://files.gtu.ac.in/circulars/15Aug/31082015_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)