



Student Start-up Support System
(S4)

Gujarat Technological University
(GTU), Ahmedabad

GTU Innovation Council (GIC)

Minutes of Review Meeting for
Guidelines of Design Engineering – 2a
5th semester – 25/06/2015

Venue: 119, Conference Room, ACPC Building,
GTU Innovation Council (S4-CiC3),
L.D. Engineering College, Ahmedabad.

GTU has introduced six courses of design spine in academic year 2014-15 from 3rd semester namely ***“Design Engineering”*** and ***GTU’s Centre for Industrial Design – OPEN DESIGN SCHOOL*** has taken up the huge and remarkable challenge to leverage and implement this course in all affiliated engineering colleges of GTU. *Centre for Industrial Design – OPEN DESIGN SCHOOL* has successfully completed one year in which we had organized 22 Faculty Development Program for 3rd and 4th semester with training of massive mass of 1500 faculty members from around 120 Engineering colleges across the states from more than 15 branches.

To thrive for excellence in this endeavour and further strengthen Design Spine, GTU has called upon a review meeting for guidelines of 5th semester and framing upcoming workshop template. Fifty trained faculty members participated under the guidance of Dr. N. M. Bhatt, Dean - GTU on 25th June 2015, where different aspects of the subjects were discussed as below.

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Agenda for Meeting:

Main agenda for meeting was -

- **Guidelines for DE-2a and framework for upcoming Faculty development program**

Other agenda was -

- Pedagogy and future pipeline for DE subject
- General Instruction to implement subject at Institute level
- Overcoming difficulties while teaching the subject (Pedagogical, technical, Managerial)
- Upcoming FDP for further training – template



(Dr. N M Bhatt, Dean-GTU had discussions for Strengthening Design Engineering Syllabi with faculty members)

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Guidelines for 5th semester for DE-2a have been approved by Dr. N M Bhatt, Dean – GTU and all participants. All participated faculty members have actively shared their suggestions to implement the Design Engineering subject and their experiences with students while teaching Design Thinking at Institute level and also shared students' feedback regarding the subjects. Through discussion we found that this innovative step of introducing Design Engineering is highly welcomed by faculty and student community in GTU. Faculty members have given suggestions as below to improve the subject's pedagogy -

- ✓ Branch specific projects should be adopted after 2nd year
- ✓ Branch specific guidelines should be involved (Interesting faculty members for content preparation committee may contact Design Team for the same)
- ✓ In 5th semester student will work upon detail design phase including all calculations and allied requirements
- ✓ At the end of 6th semester, students would complete working model for their concept
- ✓ Design Thinking projects involved human centred approach so at every stage and iterations team need to verify users need and then design accordingly
- ✓ Additional learning (As anticipated in Learning Needs matrix) can be done to achieve desired goal
- ✓ If working/functional model is expensive then students team may create prototype at institute level and then apply for funding from different government and private agencies with thorough details and report

Other suggestions for Faculty Members and Students:

- ✓ Regular interactions between students' team and faculty guide (Logbook by the guide must be maintained to track the record of team)
- ✓ Only trained faculty members in FDP at GTU would conduct sessions for Design Engineering subject (institute level trained faculty members may guide the projects)
- ✓ Learning efforts must be evaluated rather than final outcomes
- ✓ All subjects should include Design Thinking approach for practical work
- ✓ As Design Engineering would go through all the semesters, so colleges are to train more Faculty Members for future development

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- ✓ Interdisciplinary or Intercollege projects should be allowed
- ✓ Student and Faculty sensitization is required, to motivate them for canvas exhibition or awards may be incorporated by every college(Marketing of Innovation is required)
- ✓ Proper time would be given for understanding of the problem (Empathize User)
- ✓ GTU wants the projects to be preferably based on Ethical, social, environmental aspects



(Discussion is going on between faculty Members and Design Team)

Also as Computer/IT/Process related branch usually have confusion that how physical products/prototype can be developed, so faculty members have given following suggestion-

- ✓ Students must be given a general idea of the variety of software domains and certain computer languages which they can include in their project (Due to this activity student may have a chance to get hands on new languages apart from dot net, Java and android)
- ✓ Students must be aware of software analysis fundamentals, software diagrams and Software development life cycle so that they may be able to complete software analysis part of their Project
- ✓ If physical prototypes are not possible, then they may prepare flow-charts, diagrams, algorithms, programming etc.

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- ✓ The home page design with database connectivity must be completed during the 5th semester, as early as possible.



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