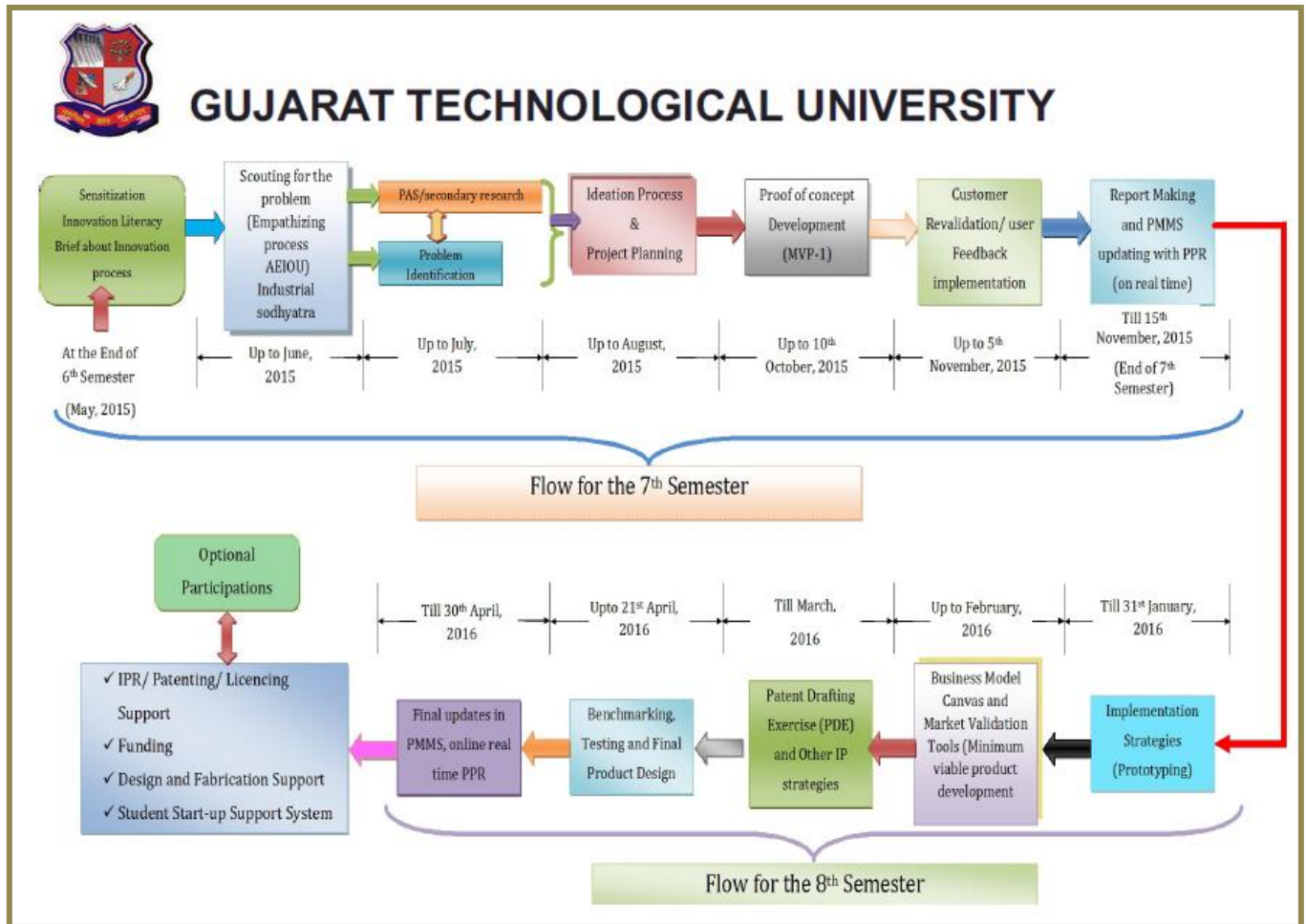


A Report:

Two Day workshop on-

“Strengthening GTU Innovation Club activities and thorough implementation of IDP/UDP framework”



Date: 15th & 16th May, 2015

Venue: GTU Innovation Council, Room No. 126, 2nd floor, ACPC Building, LDCE Complex, Navrangpura, Ahmedabad-15.

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Introduction

Final Year projects are the capstone of engineering education. After going through technical subjects during six semesters in degree engineering, the young brains should have the necessary background and have learnt how to acquire technical knowledge for solving real life challenges. The work on the Final Year project helps a student to integrate the knowledge, from various courses that he/ she has studied, for solving a problem. GTU wants the projects to be socially relevant and/or to be able to meet industry's requirements.

Regard to this context, IDP/UDP/Research Projects in the curricula is to make sure that final year students do some innovative work, which can be related to the product/process within/outside the industry. Or the IDP/UDP/Research Projects may be based on some unsolved problems of the society.

Industry Defined Projects (IDP): is a project, which is designed to improve either a product or a process in either forms/features/functions based on a real life challenges from an industry. Dedicated hours have been allotted in curricula for every week for all branches for interaction with industries and for working on the IDP/UDP. The term depicts that the projects is to be anchored upon an industrial use and it is to be done under the guidance of both an internal guide at the College and an external mentor from the industry.

User Defined Projects (UDP): is a project based upon the needs of NGOs, informal sectors, Govt. organizations and society at large. Alternatively, the UDP can be on a research problem identified by the faculties or it could be the idea of student himself.

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Objective of Program:

GTU Innovation Council, <http://www.gtuinnovationcouncil.ac.in/> organized two day program on revised structure of Final Year Projects (IDP/UDP) on 15th and 16th May 2015. GTU Innovation Club Coordinators of various institutes attended this orientation program. After attending this program he/she is to conduct a workshop at their parent institute so that awareness for the process and phases of IDP/UDP for final year projects can reach to all final year students. Given better clarity to students they can do even better IDP/UDP as a part of their final year project work.

Program Schedule

Session No.	Time	Activity	Mentor Name
Day 1 : 15/05/2015			
10.00 am – 10.30 am		Registration and High Tea	
1	10.30 am – 11.00 am	Innovation Value Chain and IDP/UDP Strategies	Hiranmay Mahanta
2	11.00 am – 12.00 pm	IDP/UDP orientation	Gagandip Singh Khanduja
3	12.00 pm – 1.00 pm	Industrial Shodh Yatra (ISY)	Karmjitsinh Bihola
1.00 pm – 1.30 pm		Lunch Break	
3	1.30 pm – 3.00 pm	Design Thinking	Karmjitsinh Bihola
4	3.00 pm – 4.00 pm	Canvases and other tools for Design	Jaimin Dave
5	4.00 pm – 5.00 pm	CiC3 information	Krutika Bhagwat
Day 2 : 16/05/2015			

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10.00 am – 10.15 am		Morning tea	
7	10.15 am – 11.30 am	IPR – PSAR, PDE strategies and other such interventions in final year Project work	Shailesh Jain
8	11.30 am -1.00 pm	PMMS tools, its objective, implementation plan and desired impact	Shailesh Jain
1.00 pm – 1.30 pm		Lunch Break	
9	1.30 pm – 2.30 pm	GIC Ecosystem (Start-up, Innovation, Fellowship)	Kalp Bhatt
10	2.30 pm – 3.30 pm	Crowd Funding	Ateet Bajaj
11	3.30 pm – 4.00 pm	Post 8 th sem activity : Extending conventional innovation chain	Hiranmay Mahanta
12	4.00 pm – 4.30 pm	Discussion Session for developing implementation strategies	Hiranmay Mahanta
13	4.30 pm – 5.00 pm	Valedictory and Certificate Distribution	Hiranmay Mahanta

Summary of Program

Session was started by participant's Introduction and sharing the objective to attend orientation program. First lecture of Morning session was chaired by Mr. Hiranmay Mahanta on topic "Innovation and student startup Environment in India and role of state technology University ". He focused on following points

1. Importance of Final year projects: Purpose of final year projects to provide quality work within time frame. Importance of PPMS tool for online submission for final year projects.

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2. IDP/UDP requirement and objective: Normally it is observed that the student projects are not based on real life problems of an industry or a society, there is a huge gap between their understanding and practical requirements. He explained the strategies involved in every step of IDP/UDP and various frameworks which have been developed at GIC to cater the needs.
3. Difference between R & D and Innovation, how to innovate, innovation cycles, why student innovators will play crucial role in days to come India's national innovation ecosystem. Agendas, strategies and impact of the IDP/UDP interventions and how different stakeholders associated with this mission will play crucial role.
4. Implementation of student efforts on innovation: GTU is the 1st state technological university which believes that by thoroughly crafted policies, processes, incentives and real-time mentoring and quality benchmarks at least 1000 B.Tech student projects can be converted into



useful products every year. Some of these innovations can possibly become successful technology start-ups or get transferred to MSMEs who in turn can use them for improving their productivity and create value.

5. How GTU Innovation Council is disrupting the innovation ecosystems within a state technology university and how such efforts will create new benchmark and policy spinoffs which will have larger impact at national level in days to come. He shared exact role expected from each actor, institutions and how university is trying to execute the overall programs.

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Afternoon session is conducted by Gagandip Singh Khanduja regarding the complete flow of IDP/UDP project for final year projects. He also discussed the difference between IDP and UDP project, FAQs for IDP/UDP, process and expected outcome from students at the end of IDP/UDP projects.

Regarding FAQs related to IDP/UDP please refer page 2 -5 of

http://www.gtu.ac.in/circulars/12July/19072012_01.pdf

Or page 2-4 of http://www.gtu.ac.in/circulars/14Jul/07072014_01.pdf

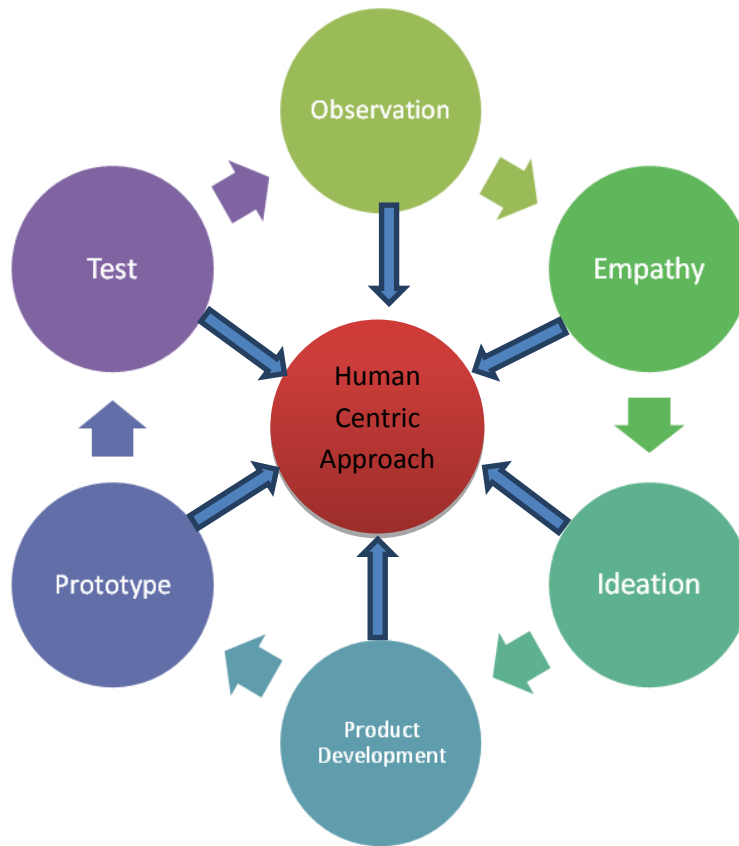
Last session of first day was instructed by Karmjitsinh Bihola on introduction of Industrial Shodh Yatra and importance of Design Thinking methodology. He focused on importance and procedure of Shodh Yatra. The students are required to form teams of 3-4 students (in general) for working on their final year projects. With the guidance of faculty members they will start working towards Industrial Shodh Yatra (ISY) in summer vacation (gap between 6th and 7th semester) to define a problem statement on which they will work for their final year project. (Mentors are explaining different aspects of final year projects)



ISY includes four elements-

- (2a) Scouting for the problem - 1st June to 30th June 2015;
- (2b) Secondary Research/ Prior Art Search -1st July -31st July 2015
- (2c) Problem Definition – 1st July to 31st July 2015;
- (2d) Registering into PMMS tool of GTU – Till 31st July 2015

In continuation with this, he also thoroughly explained Design Thinking methodology and perceptions of GTU in introducing Design Engineering subject in curricula. Design Thinking is a Human Centric approach to solve all kind of problems from the simplest to complex problems and it better work for particular (User Centric) kind of problem. He added Design Thinking is a mindset that is Human Centered, possibility driven, option focused and iterative. This can be divided into six interactive as well as iterative steps shown below. Each steps of Design Thinking involve rigorous efforts from defining a particular problem to deploy the solution in the market. Every step would involve iteration to check the idea/solution with previous one to move forward.



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On second day, first session was initiated by Shailesh Jain on topic of Basics of IPR and Patent filling in IDP and UDP process. He shared the views on importance of IPR and patent for innovative projects. He discussed on following points -

- Basic of IPR and comparisons between patent, copyright, trademark and design.
- Patentability criteria and invention which are not patentable
- Patent drafting and filing procedures
- Prior art search (PAS)
- GTU initiatives on IP activities

With continuing this session Gagandip Singh gave brief idea about PMMS Tool and its workflow and solves the query related to PMMS tool.

After IPR related session, Krutika Bhagwat discussed the goal of Community Innovation & Co-Creation Centre (CiC3). She also briefed the activities steered by CiC3.

- Expose students with the latest open source hardware boards and modules
- Assist students to create innovative and creative projects that solve real world problems.
- Encourage entrepreneurship among students
- Conduct events like Hackathon/Workshop etc. to provide students a platform for showcasing their talents.

Further Kalp Bhatt provided the glimpse of GTU Start up Policy and GIC Ecosystem (Start-up, Innovation and Fellowship). He discussed on following topic on how to:

- Support existing student start-ups
- Nurturing new start-up ideas
- Help students convert ideas into enterprises
- Vision of generating over 1 lac student start-up ideas every year
- Convert 10,000 ideas into proof of concepts
- 1000 student start-ups every year

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Mr. Ateet Bajaj (Start 51.com) provided the information regarding Crowd Funding Initiation of GTU and CFI100 Programme. He explained how creative ideas can be fostered with the help of Crowd Funding and converted into useful products. He also showed the advantages of Crowd Funding over other funding methods.

In afternoon session of second day a canvas activity was conducted by participants where they suggested the ideas to improve innovation value chain and GTU policies for final year projects and other initiatives. In this activity all the participants were divided into 12 teams where all team members were from different colleges and 30 minutes was given to them for canvassing their ideas and suggestions regarding above subjects. After 30 minutes, 3 minutes were given to represent their ideas and suggestions. Out of these best team and runner up team was bestowed with awards.

The following suggestions were given by participants

Team	Member of teams	Suggestion
1	Mr. Arvindsinh Rana Mr. Shaktisinh Gohil Mr. Pragnesh Patel Mr. Tejas Wadiya Mr. Darshan Shah Hetel Shah	Anroid/iOS Application for PMMS Tool could be helpful For viva on design subject Expert should be subject specific to make the process more impacting
2	Ms. Shruti Dave Ms. Asmita Hadiyal Mr. Viren Patel Mr. Nilesh Parekh Mr. Bharat Parmar	Mini project should be promoted by colleges and departments Internship weightage should be involved in academic weight Poster/Project presentation competition should be mandatory Guideline should be same every year if possible Canvas exercises should be compulsory and done seriously Analyse the feedback forms and share with all teachers
3	Mr. Jigar Pandya Mr. Nayan Goswami	Poster Fair/Project fair and competition to be mandatory Video manual for PMMS Tool and share it with students and

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	Mr. Harsh Dave Mr. Kunal Motwani Mr. Anirudha Singh	teachers well before their project and course starts In Viva, priority should be given to GIC coordinator and GIC club coordinators to play bit more serious role in colleges
4	Mr. Nayan Patel Mr. Jigar Shah Mr. Hiren Rathod Mr. Jaimin Brahmbhatt Mr. Sanket Raval	Support system like blog should be started for the benefit of students Student teacher interaction should be frequent (informally) Common platform for evaluation could be added advantage (online plus off line) Editing option in PMMS tool could help teams
5	Mr. Niraj Tevar Ms. Dipti Patel Kiran Limbachiya Mr. Omkamal Vashi Mr. Anil Kannauzia Mr. Amit Panchal	Improve evaluation program every time Give more weightage to practical exam than present scenario E-library should be used by students frequently in PAS and other activities in IDP/UDP, final year project Industry visit should be moderated by teachers in every branch Interdisciplinary project should be encouraged and properly communicated to students Mobile application would help spreading GIC and S4 message to all students and teachers Personality development program could be added , like CPDP and others together Learning beyond classrooms should be promoted
6	Dr. Seema Mahajan Mr. Zuned Shaikh Mr. Saurin Dave Ms. Prexa Parikh Ms. Heema Shukla Mr. Mosam Pandya	Awareness of Crowd funding program could help students at their early stage PMMS tool video and other information should be shared with students at early stage for benefiting students.

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7	Mr. Satish Kataria Mr. Niraj Thakor Mr. Rakesh Makwana Mr. Parvej Ansari Mr. Alpesh Patanwadia Ms. Rachana Dahiya	Pre final year student can understand final year student project Motivational program/seminar/workshop Industrial projects should be promoted; faculty should play a role in executing these things. Such awareness programs need to be done at college, sankul and city levels.
8	Mr. Ajaysinh Rathod Mr. Hemant Jariwala Mr. Kailash Saini Mr. Nikunj Patel	IDP/UDP awareness program should be made properly Design engineering should be adopted by all in serious manner as it will improve students quality IDP/UDP workshop for 5 th sem could be tried in mock version and inferences to be analyses Shodhyatra should be done properly by students and colleges need to play a role in this in this process
9	Mr. Kumar Bhatt Mr. Trilok Parmar Mr. Kuldeep patel	Involvement of HOD/Principal in GIC programs to be increased and students should be updated about various programs, impact and its objectives
10	Ms. Hemaxi Ms. Kushbu Ms. Renu Mr. Dharmesh	Motivational content should be periodically shared with students periodically. Industry oriented syllabus, practical problems need to be taken under IDP/UDP Teach crux of every steps associated with design engineering to all students.
11	Mr. Ravi Dabla Ms. Foram Dharsandiya Mr. Ishit Shah Mr. Satyadev Vyas	Industry Institute Interaction should be a mandatory effort in every college/department and academically it should have some weight. Entrepreneurship development cell / S4 extension centers should be must in every campus affiliated to GTU Subject specific hobby clubs to be set up across GTU colleges

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and involve students in managing activities under them.

GIC workshop for principals and HODs would be preferable as they lead the policy implementation things in colleges.

More Glimpses of workshop:



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(Winners of Ideas and Suggestions Canvas Competition within the workshop being felicitated by Mr.Hiranmay Mahanta, Honorary Director,GTU Innovation Council)

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