

A glance at Innovative Initiatives undertaken by GTU Innovation Council

At its GTU Ahmedabad Co-creation centre



GTU Innovation Council

GTU Ahmedabad Campus

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GTU Innovation Council (GIC) is India's 1st large scale university based innovation ecosystem in an affiliated type system. Since its inception in 2010 it has organically grown while intervening at all layers of innovation processes. One of the key facets of this Innovation movement has been students and technology youth has been the key driver for its agendas. In the process till now it has not only made pedagogic experiments at large scale but also proven various Indian models of innovation and pre incubation strategies impacting 100s of students in the state of Gujarat. Its implication and insights from the efforts have inspired both state and national policy makers who are shaping futuristic innovation and start-up agendas.

You may have a glance at the efforts being done at one of its co-creation centre at GTU Ahmadabad campus as given below. All the data mentioned here have been compiled by team GTU innovation Council from its day to day efforts in past years.

Key efforts at GTU Innovation Council Co-creation Centre (GTU-ACPC Centre):-

1. Intellectual Property Rights (IPR)
2. S4, Student Start-up Support System
3. Community innovation and Co-creation center, CiC3
4. Open Design school

About GTU Innovation Council:

- The **most active innovation council of India**
- Established on 2nd Aug 2010
- IPR workshops started on 3rd Sept 2011
- GTU Student Start-up Support System (S4): working since February 25, 2012.
- The S4 Co-Creation Centre (S4-C3): started on 2nd March 2013.
- The C-i-C3 (Community innovation Co-Creation Centre): working since 1st May 2013.
- Design Thinking: Leader in infusing the 4-year BE program with Design Thinking.
- Open Source Technologies Clubs (OSTC) have been started since 2013
- GTU's Master's program in Wireless Mobile Computing was started in August 2011

GTU IPR Activity:

GTU has followed the path of faculty training, and there by huge efforts has been made to train faculty on different aspects of IPR. This trained faculty members transforms the learned knowledge to fellow colleagues and students at their respective colleges.

Brief outcome of GTU IPR activities:

- By all such workshops and seminar at present GTU has a very large pool of nearly 7100 trained faculty, who have been trained and made aware about the basics of IPR/Patents in particular and also for the basics of patent search methodologies.
- Due to these efforts, till today more than 354 provisional and complete Patent applications have been filed by students and faculty of GTU affiliated colleges.
- Via Patent Search and Analysis Report (PSAR) generation activity, more than 1,19,000 students have studied and prepared more than 6,03,000 patent search and analysis reports and these have been uploaded on the web-site by studying equal number of patents during the three academic year 2013-14 to 2015-16.
- Via PDE activity, more than 42,000 provisional patent documents have been drafted as learning exercise by students in three academic years 2013-14 to 2015-16.
- GTU has also started very unique kind of Post Graduate Diploma in Patent's Law (PGDIPR) and six months certificate course on IP valuation & Management (IPVM).

In GTU IPR Mission, through **75 capacity building workshops** more than **7100 faculty members and students** have been trained and benefited which ultimately leads to **354 provisional and complete patent filing** for the 1st time in the state of Gujarat.

| Sr. No. | Type of new IPR initiative started by GTU | Month-Year of Starting | Total Events till August 2015 | No. of faculty/ students trained |
|---------|--|------------------------|-------------------------------|----------------------------------|
| 1 | Basics of IPR, Patenting in Pharmaceuticals & Patenting in Engineering | September 2011 | 13 | 1975 |
| 2 | Patent Search Methodology (PSM) | July 2012 | 12 | 1915 |
| 3 | Patent Clinic (PC) | July 2013 | 25 | 1400 |
| 4 | Patent Search and Analysis Report (PSAR) | September 2013 | 07 | 646 |

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| Sr. No. | Type of new IPR initiative started by GTU | Month-Year of Starting | Total Events till August 2015 | No. of faculty/ students trained |
|---------|---|------------------------|-------------------------------|----------------------------------|
| 5 | Patent Drafting Exercise (PDE) | February 2014 | 08 | 750 |
| 6 | PatentTrack | April 2014 | 03 | 150 |
| 7 | PCT Patent Journal Analysis Activity | July 2014 | 02 | 80 |
| 8 | Post Graduate Diploma in IPR (PGDIPR) (One Year Off Campus Course) | September 2014 | 02 | 50 |
| 9 | Patent Search & Technology Landscaping (PSTL) | June 2015 | 02 | 130 |
| 10 | Industrial Design Protection & Registration (IDPR) | July 2015 | 01 | 60 |
| | | TOTAL | 75 | 7156 |

Project Mentoring and Monitoring System (PMMS)

GTU IT team has developed a Project Mentoring and Monitoring System (PMMS) portal to managing various activities related to final year B.E. Projects. PMMS is very user friendly and result oriented platform which helps students, faculty, external guide, mentor, colleges for managing multiple activities being carried out during working on final year project of B.E.

PMMS is in operation since January 2015. PMMS is a platform which covers multiple activities, which are being carried during final year of B.E. It covers activities such as student registration, team formation, Periodic Progress Report (PPR), Patent Search & Analysis Report (PSAR) generation activity, Design Engineering – Canvas activity, Business Model Canvas and its report upload, Patent Drafting Exercise (PDE), Final project report upload, Uploading the plagiarism search report, Completion Certificate generation.

Various functionalities have been generated on PMMS platform for catering the need of students, faculty, project guide, external mentor, HOD and Principal. And GTU IT team is continually working to add further more features to make system more user friendly and result oriented.

PMMS is been used for all projects being carried out by the students, faculty, external guide, mentor and colleges in all the BE colleges/institutes, affiliated with GTU.

Objective of the PMMS:

1. To develop a system for helping the students to get appropriate help and mentoring
2. To help them work more systematically on their project.
3. To help students to remain in active contact with their team members, their Faculty Guide and industry-mentors (if any), HOD, principal as well as by university - on a real time basis.
4. The students in the team can update about their progress in project and guide can comment on their status, progress and problems.
5. This will increase collaboration and co-creation while improving novelty of their work.

C-i-C3 (Community innovation Co-Creation Centre):

Through **86 workshops and programs** of **Community innovation and Co-creation centre (CiC3)**, which are based on various themes and concepts totally **5145 students and professors** participated till August 2016.

| Name of Activity | Number of Events | No. Of Participants |
|--|------------------|---------------------|
| 3-D Printer workshop | 2 | 140 |
| Rashritya Aavishkar Abhiyan with Shree Swaminarayan International School | 2 | 90 |
| FDP & STP on Open source controller board | 1 | 73 |
| Cyber Security workshop | 1 | 45 |
| Summer Camp 2016 Open Source Board ARDUINO, RASBERRY PI, MSP430 | 1 | 55 |
| ROBOCON 2017 Training Session | 1 | 65 |
| ROBOCON 2016 (National/International Robotics Competition) | 1 | 40 |
| Rashritya Aavishkar Abhiyan with Navkar School | 1 | 55 |
| Final selection of research proposals related to GTU sensor lab | 1 | 23 |
| Winter camp GTU CiC3 software LABVIEW, SCILAB, NG-SPICE. KI-CAD | 1 | 60 |
| Winter camp GTU CiC3 Open Source Board ARDUINO, RASBERRY PI, MSP430 | 1 | 60 |
| App Development Competition (HITCON 2016) | 1 | 35 |
| Rashritya Aavishkar Abhiyan with Uniqyou School | 1 | 90 |
| CiC3 project discussion | 1 | 20 |
| Eye robotics challenge | 1 | 12 |
| FDP Industrial approach to design & project execution using MATLAB | 1 | 50 |
| Humanoid ROBO NAO workshop | 1 | 173 |
| Eye Robotics workshop | 1 | 67 |
| Rashritya Aavishkar Abhiyan of MHRD for students of ID Patel School, NIOS School & Saryayogam School | 1 | 45 |
| AWS Educate meeting AMA (Ahmedabad Management Association) | 1 | 38 |
| Inauguration of computer lab by Mr. Vincent Quah, Asia Pacific Head, Amazon Web Services | 1 | 25 |

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| Name of Activity | Number of Events | No. Of Participants |
|--|------------------|---------------------|
| Faculty Development Program on Amazon Web Services Cloud Computing | 1 | 37 |
| Visit of 10 delegates from Sharad Inst. Of Tech, Kolhapur to know about various GIC activities | 1 | 26 |
| 3-D Printer Training to GTU staff | 1 | 24 |
| Meeting with TATA Motors GT Motors & Robocon team | 1 | 40 |
| GTU Robocon 2016 technical discussion with students & faculty | 1 | 37 |
| Vinyl Cutter Training to GTU Staff | 1 | 16 |
| 36 hours Hackathon - Code for Gujarat | 1 | 180 |
| Identifying social problems and framing problem definition - code for Gujarat | 1 | 50 |
| Roundtable for Code for Gujarat Hackathon | 1 | 23 |
| Design thinking workshop under Code for Gujarat (with DDO Ahmedabad) | 1 | 90 |
| CiC3 Innovation Project discussions and selection | 1 | 80 |
| 3 days Advance RASBERRY PI workshop | 1 | 78 |
| 4 days Advance Raspberry Pi workshop | 1 | 89 |
| 3 days program on LABVIEW for research partners | 2 | 333 |
| Open Source Board – ARDUINO | 1 | 103 |
| Open Source Board - Raspberry Pi | 1 | 50 |
| Smart City Lab Inauguration | 1 | 51 |
| Conference to finalise course for Anchor Institutes | 2 | 13 |
| One day professor summit on “embedded system design using ATMEL ATMEGA 168PB XPLD MINI | 2 | 54 |
| One day workshop on asp.net | 1 | 67 |
| Workshop on Signal processing and basic of an Antenna | 1 | 56 |
| Workshop on NX - CAD Design Software | 1 | 79 |
| ARDUINO open challenge | 1 | 28 |
| MY- RIO open challenge | 1 | 9 |
| National Instrument - Hackathon | 1 | 78 |
| Faculty Development Programme on AVR microcontrollers | 1 | 42 |

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| Name of Activity | Number of Events | No. Of Participants |
|--|------------------|---------------------|
| One day workshop on Raspberry Pi | 1 | 133 |
| Seminar on Industrial Automation | 1 | 89 |
| Seminar on PLC-SCADA | 2 | 56 |
| 2 day workshop on "Pico/Nano/Micro Satellites (PNMS)" | 2 | 37 |
| Celebration of Digital India Week at Chandkheda | 1 | 19 |
| ARDUINO Hackathon as part of digital India at ACPC | 1 | 64 |
| Google hangout meeting for setting up Anchor Institute and Robo research group in electronics | 1 | 69 |
| ARDUINO one day workshop | 2 | 89 |
| ARDUINO one day workshop | 2 | 458 |
| One day Hackathon "Design & Framework on final year projects area analysis & comparison in Mechanical Engineering" | 1 | 57 |
| Student training programme on Projects let's make it | 2 | 290 |
| Seminar on Advance Technology in Industry | 2 | 43 |
| Robo Research Group meeting | 2 | 68 |
| 5 days' workshop on Electronics for Copter | 2 | 67 |
| Workshop on ORAGAMI | 1 | 116 |
| GTU Central Techfest Robo Soccer Competition 2015 | 1 | 78 |
| GTU Central Techfest Robo Exhibition 2015 | 1 | 92 |
| 2 days' Workshop on autonomous Robo soccer | 2 | 112 |
| PMO App Development Contest by Ideation workshop | 1 | 17 |
| Arduino day | 1 | 55 |
| Google hangout meeting with Image Processing research group | 1 | 36 |
| Google hangout meeting with Robo research design group | 1 | 25 |
| Google hangout meeting with Embedded research group | 1 | 26 |
| Hack-Pi-Duino competition on ARDIUNO based Hackathon | 2 | 55 |
| Total | 86 | 5145 |

Centre for Industrial Design (Open Design School)

- GTU has introduced a creative and interactive practical approach in its syllabi named **“Design Engineering”** in AY 2014-15. Design Engineering is very unique and pioneering initiation of GTU based on globally accepted and implemented **“Design Thinking”** methodology by designers and engineers.
- Through the efforts of making design spine to contribute in make in India at **Open Design School (ODS)**, 36 Faculty Development Programs of 4 days each were held through which 2822 faculty members were trained who later implemented 1st of its kind design program in India at GTU.
- **GTU's - Centre for Industrial Design (OPEN DESIGN SCHOOL)** has also organized probably the first Indian Conference on Design Thinking on **“Infusing Design Thinking in Engineers’ Mind-sets across Industries & Building a Spine of Design Engineering Courses in Academia”** on 4th and 5th of January, 2016.
- In April, ODS organized National Symposium on **“Role of Design in Make in India and Start-up India”** on 9th April 2016.

| Name of Activity | Number of Events | Total No. of Participants |
|---|-------------------------|----------------------------------|
| Faculty Development Program on Design Engineering | 36 | 2300 |
| National workshop on “Understanding International perspective and Methodologies used in Delivering Design Engineering Courses” by Prof. Libby, UPEI, Canada on 22nd – 23rd April 2015. | 1 | 47 |
| Two day workshop which was held to sensitize GIC club coordinators on 15th -16th May 2015 for the flow of IDP/UDP projects through the 7th - 8th semester students. | 1 | 66 |
| “Industrial Shodh Yatra (ISY) 2015 for final year projects (IDP/UDP) based on Design Thinking Methodology” was organized on 28th -31st May 2015 to scout the industrial problems. | 1 | 18 |
| GTU has been appointed as “Director for Indian Chapter of APEN – Asia Professional Education Network”. GTU’s Design Team met representatives from universities from Japan, Korea, Singapore, China, Vietnam, Cambodia, Indonesia, Thailand, Malaysia, Laos, Philippines, Brunei and Myanmar on 6th June at a Board of Directors’ meeting of APEN at Indonesia. All universities are working on introducing Design Thinking and Project-based learning in their syllabi. | 1 | 20 |

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| Name of Activity | Number of Events | Total No. of Participants |
|---|------------------|---------------------------|
| Workshop on “Integrating Projects and Design into Core Engineering Courses: Enhancing Learning and Preparing Professionals”. A unique 3-Part course offered by GTU in collaboration with Purdue University, USA expert faculty Prof. Bill Oakes, Director, EPICS Purdue University. | 1 | 59 |
| Two day Workshop on “Innovations in Design Based Learning: Transforming Engineering Education” by Prof. Geetha Prakash {Professor, Dept. of ECE, PESIT Bangalore} on 3rd - 4th October 2015. | 1 | 32 |
| Design Thinking workshop for scouting problems within rural areas has been organized on 15th October which was the part of a 36 hrs. Hack-a-thon event “CODE FOR GUJARAT” that has organized on 27th – 28th October 2015. | 1 | 100 |
| International Conference on “Infusing Design Thinking in Engineer’s Mindsets across Industries and Building a Spine of Design Engineering Courses in Academia” organized on 4th – 5th January 2016 to strengthen the Design Spine in academia of Engineering Education and how engineering education may cater the need of Industry today which will help “Make in India”, “Start-up India, Stand-up India” dreams come true. | 1 | 180 |
| National Symposium on “Role of Design in Make in India and Start-up India” on 9th April 2016. This symposium brought Academia, Industry and Government policy makers on one platform to discuss how Design education can contribute in Make in India and Start-up India. | 1 | 110 |
| Total | 45 | 2932 |

Student Start-up Support System

On 17th July 2015, impact case study of such center was presented to **Honourable Finance Minister of Gujarat** while he launched Start-up efforts at AMA where he publicly shared that Gujarat should have such centers at strategic locations in all major cities and districts of Gujarat and GOG will facilitate this so that 500 student start-ups can be hatched every year through physical and virtual incubation process through hub and spoke model.

DST, GOI took special note of all these efforts and Secretary NSTEDB applauded the efforts of this center. later on NSTEDB, Govt of India approved this center to be converted as a 1st technology Business Incubator, TBI among any State technology university across India to support young start-ups through a central govt support of more than 5 crore in next 5 years to contribute towards Start-up India Mission of Honourable, Prime Minister.

GTU Innovation Council has taken two important steps after organizing multiple meetings and workshops with experts in Start-ups. These initiatives are likely to boost the culture of entrepreneurship across its 500 plus colleges.

1. Release of **GTU Student Start-up policy** after its National Workshop in November 2014: This policy has created a conducive environment for student start-ups.
2. Empanelling Technology Business Incubators with GTU for introducing Minor/ Specialization in Technology Entrepreneurship, where students may take up this additional optional learning at TBIs.

GTU S4 (Student Start-up Support System) has set up a Policy Incubator where various policies – relating to student start-ups- are discussed, debated and are put under pilot testing mode. The objective of the Policy Incubator is to hold dialogues, discussions, and conferences for a wider perception of the needs of start-ups and to learn from best practices. GTU S4 then develops the next practices for student entrepreneurship across the State university systems.

On November 21-22, 2014, GTU and AICTE jointly organized a National Workshop on Development of Policy Framework for Innovation, Student Entrepreneurship & IPR for Universities with a Large Number of Affiliated Colleges

(Report: <http://www.gtu.ac.in/circulars/15Apr/29042015.pdf>).

Note: Now the policy is used by many universities in India

Links to references to Policy frame works in GIC and media:-

- A. <https://egtu.wordpress.com/2016/05/18/aicte-prepares-to-implement-start-up-policy-for-technical-institutes-from-july-august/>

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- B. <http://gtuinnovationcouncil.ac.in/circulars/>
- C. <http://timesofindia.indiatimes.com/city/coimbatore/AICTE-mulls-policy-to-help-students-launch-own-startups/articleshow/52876958.cms>
- D. Student Startup Policy:- http://files.gtu.ac.in/circulars/14DEC/05122014_02.pdf
- E. http://files.gtu.ac.in/circulars/16May/17052016_15.pdf
- F. <http://www.gtu.ac.in/Media/Apr15/26042015.pdf>
- G. http://files.gtu.ac.in/circulars/16Feb/04022016_01.pdf

8 – 9 August, 2015: Visit of Prof. Jimmy Gandhi is Director, Ernie Schaffer Centre for Innovation & Entrepreneurship at California State University, Northridge, USA and Two Day Workshop on **‘The Roles of Governments, Universities and Financial Institutions in facilitating Student-Start-ups’**

28th and 29th May, 2015: Visit of Dr. Ranji Vaidyanathan, Riata Faculty Fellow, School of Entrepreneurship, Spears School of Business, Oklahoma State University, USA and a two day seminar on **‘Challenges and Opportunities in Building Start up Ecosystem in the State’** was organized to discuss the role of governments in building a start-up ecosystem in the state and a round table of Vice Chancellors to discuss offering additional credentials in Technology Entrepreneurship.

November 21-22, 2014: GTU and AICTE jointly organized a **National Workshop on Development of Policy Framework for Innovation, Student Entrepreneurship & IPR for Universities with a Large Number of Affiliated Colleges.**

GTU Innovation Sankuls (A framework for facilitating an active connectivity of Colleges with industries): There are 25 Sankuls, distributed geographically all over Gujarat. Every Principal. Director of every College is a Member of one of the Sankul Committees. Every Sankul Committee is co-chaired by

- (i) **Co-Chair (Academic)** – a senior academician of the area of the Sankul and a
- (ii) **Co-Chair (Industry)** - an industry Leader of the area of the Sankul

GTU Innovation Clubs: Every College, affiliated with GTU is required to have an active student-driven entity called the Club.

Students Start-up Support System (S4): To help the budding student entrepreneurs to acquire the skill-sets, which enable them to innovate and develop technology-based student start-ups: S4 continuously organizes hands-on learning workshops.

- a. **Social Entrepreneurship boot-camps**
- b. **Flash Ventures** (ideation workshop, which goes through stages of problem identification, problem solving and ‘customer’ interviews, prototype designing, and design-re-design loop)
- c. **Fuel Pad for Ideas and Start-ups** (a series of activity parts for learning various systematic

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- strategies to develop an idea from scratch)
- d. **Hackathons** in collaboration with DDO (Ahmedabad and Sabarkantha) in October 2015 where many students participated to solution current problems through digital means.
 - e. **Start-up Round Tables** (of students and upcoming start-ups)
 - f. **Start-up Analysis Sessions** (market research in which start-ups are categorized into market segments and analysed with founder's background, funding type, investors, marketing strategy, product type etc)
 - g. **Crowd-funding initiators**
 - h. **S4's Policy Incubators** (RoundTable meetings of students, faculty members and other stake-holders from the society for understanding various aspects of policy issues): Some of the recent ones have been on the status of start-up movement and on the policy regime for start-ups,
 - i. **Hosting national conferences, workshops and symposia.**

Through **228 workshops/programs** at S4, Student Start-up Support System, **25,910 students and professors** participated and benefited in start-up related efforts. Nearly **103 student start-ups** participated through various activities across start-up value chain at this center.

| Name of Activity | Number of Events | No. of Participants |
|--|------------------|---------------------|
| Roundtable meeting with start-up | 1 | 50 |
| Orientation Program for GIC Associates | 3 | 180 |
| Entrepreneurship learning series (July'16) | 8 | 400 |
| Student Project to student Start-up | 1 | 250 |
| Flash Venture | 20 | 4600 |
| Mobile Application Boot camp | 10 | 1350 |
| Social Entrepreneurship Boot camp | 3 | 560 |
| S4 Entre Boot camp | 3 | 400 |
| Cyber Security | 10 | 500 |
| S4 – S4 Boot camp | 2 | 350 |
| S4 Start-up Round tables | 25 | 5830 |
| Hackathon | 5 | 570 |
| Capacity Building of GTU Innovation Clubs | 30 | 2400 |
| Social Media workshop | 7 | 455 |

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| Name of Activity | Number of Events | No. of Participants |
|---|------------------|---------------------|
| Design Wednesday | 16 | 2100 |
| Motivational Monday | 4 | 260 |
| Patent Thursday | 4 | 175 |
| Start-up Analysis | 3 | 225 |
| Institute Ambassador Meet-up | 1 | 30 |
| Sensitization of GTU affiliated colleges | 15 | 1500 |
| Fuel-pad | 1 | 73 |
| Design Driven Innovation: Sanitary Problems | 1 | 200 |
| Legal Aspects on IPR | 2 | 166 |
| Building Innovation Evangelist | 1 | 120 |
| History Creators | 1 | 350 |
| Microsoft Azure Workshop | 2 | 95 |
| Session with Fellowship aspirants | 1 | 38 |
| CFI Press Conference | 4 | 160 |
| Round Table Discussions | 9 | 270 |
| Dev Camp Windows Phone App Development | 1 | 30 |
| Social Media for Student Beginner | 1 | 35 |
| Social Media for Student Intermediate | 1 | 40 |
| Social Media for Student Advanced | 1 | 70 |
| Report Round Table Discussion on Gujarat Start-up Policy | 1 | 80 |
| Report Round Table Discussion on Implementation of GTU Start-up Policy | 1 | 75 |
| Envisaging a Vibrant Student Start up Ecosystem in Gujarat : A Dialogue Involving Student Start Up Ecosystem Leaders | 1 | 85 |
| Capacity building for student Vice President of GIC | 1 | 95 |
| Two Days Workshop for GTU Innovation Club Coordinators of Degree Engg. Colleges affiliated to GTU for Capacity Building and Developing Strategies to Implement Innovation ,IPR, Design and Entrepreneurship Policies in coming academic year (rejuvenating GTU Innovation Club activities and thorough implementation of IDP_ UDP framework) | 1 | 53 |

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| Name of Activity | Number of Events | No. of Participants |
|--|------------------|---------------------|
| Round Table Discussion with CEOs of all Technology Business Incubator (TBI) | 1 | 35 |
| Crowd funding Initiator | 4 | 450 |
| Principals Round Table Discussion on Specialization in Technology Entrepreneurship | 1 | 35 |
| Press Meeting (AICTE chairman) | 1 | 30 |
| Start-up Meeting (AICTE Chairman) | 1 | 45 |
| Start-up meeting with Principal Secretary Education Govt. of Gujarat | 1 | 30 |
| Round Table Discussion with Mrs. Bhargvi Dave (DDO) Ahmedabad for code for Gujarat | 3 | 80 |
| Research Workshop on is Start up Policies using Crowd Sourcing | 1 | 50 |
| Roundtable meeting with DDO Ahmedabad Ms. Bhargavi Dave | 4 | 75 |
| Product Design with Innovify | 1 | 50 |
| Finding problem statements with help of Government Officials | 1 | 70 |
| Learning design based innovation in product & process in industries | 1 | 45 |
| Meeting with delegates of Sharad Institute of Technology | 1 | 25 |
| Workshop on Start-up Liberty | 1 | 20 |
| Implementing Design Thinking in Office and Domestic Products | 1 | 40 |
| Building IT skills : Wordpress | 1 | 400 |
| Innovation Jam (Technology + Design + Management) | 1 | 190 |
| Meeting with GIC Student Associates | 1 | 20 |
| Total | 228 | 25910 |

E-library

- To provide 24/7 E-library access to research students at the centre of city in support of the University's teaching and research mission, Gujarat Technological University has established **E-LIBRARY - CITY CENTER CUM READING ROOM** at Gujarat Technology University's Ahmedabad Campus, Room No: 128, ACPC Building, L.D. Engineering College Campus, Navrangpura, Ahmedabad
- ELIBRARY-CITY CENTER CUM READING ROOM provides flexibility for GTU students to access E-journals, E-Book's, and other E- resources at their convenience to enable the advancement of knowledge and discovery with no cost to students.
- ELIBRARY-CITY CENTER CUM READING ROOM is well equipped with computer systems and Internet connection to access E-resources. Students can access GTU'S repository to gain the ideas about different projects, dissertation etc.

FACILITIES PROVIDED BY E-LIBRARY:

Subscribed E-Resource/Other Resources/Free EBooks

- 1) GTU has Purchased E-Resources from following publishers : IEEE, ASCE, ASME, Emerald
- 2) Trial version for evaluating few Journals by users like as : J-Gate, Indian Busiss Insight, ProQuest Dissertation, Bentham(Pharmacy), ACM, Cambridge E-Book Cambridge E-Journals.
- 3) GTU had uploaded free resources on E-resources TAB and Free-E-Resources TAB, and had put all the Links on RemoteXS software; so, through this user wise usage report will be available to viewing purpose.

GTU Repository:

GTU E-library also provides access to following GTU repository resources:

- 1) **ALCE, Presentation** : Active Learning Creating Excitement (ALCE) TAB contains available Engineering Brach wise -subject wise material (in PPT format)
- 2) **IPR/Patent:** IPR TAB gives guidance for patent related activity
- 3) **E-Dissertation/E-Thesis/E-Projects** : GTU had uploaded full thesis for reference purpose: ME, MPharm , MBA-GCSR(Report)-CP-SIP, MCA and Vishwakarma Yojana
- 4) **ALVCOM:** TAB provides NPTEL Videos link for viewing and learning purpose

Till today more than 1400 researchers have taken benefits of the E-library services.

Open Source Technologies Clubs (OSTC)

Gujarat Technological University has introduced Open Source Technologies Clubs (OSTC), as a part of the GTU Innovation Clubs in Colleges, since 2013 and till date **90 OSTCs** have been established and various activities are going on successfully under these OSTCs, all across the State.

To strengthen the working of OSTCs through coordination, Nodal Centers at each Sankul are also being established. (Ref: <http://www.gtu.ac.in/circulars/14Apr/23042014.pdf>)

Through **18 workshops/programs** conducted by GTU under OSTC, more than **985 students and professors** participated in various programmes and benefited.

| Event | Total Participants |
|--|--------------------|
| One Day workshop on Open Source for Embedded System Development | 31 |
| Celebration of Software Freedom Day (SFD) | 41 |
| An Open Discussion Meeting | 30 |
| PMO App Development Contest -Ideation Stage | 20 |
| Two Days Awareness Event of Mozilla | 55 |
| Workshop on LaTeX | 75 |
| Python User Group Orientation Program and Python Awareness Event | 58 |
| Two Days' Python Bootcamp | 41 |
| Workshop on Laravel | 20 |
| Workshop on LaTeX | 25 |
| Two Days workshop on Ajax-Json | 50 |
| Workshop on Bootstrap | 55 |
| Concluding session of Digital India Week | 53 |

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| Event | Total Participants |
|---|--------------------|
| Three Days Python Workshop | 57 |
| Brainstorming Workshop on Research in Cyber Security | 43 |
| Workshop on LATEX | 40 |
| Two Days Python Workshop followed by Inaguration of Pyladies | 61 |
| Open Source Summer Camp(Workshops on Mozilla, Java 8.0,Bootstrap and Latex) | 230 |
| Total | 985 |

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Mobile and Wireless Technologies Club (MWTC)

Gujarat Technological University has been working since August 2011 in the field of Mobile Technologies. GTU's Master's program in Wireless Mobile Computing was started in August 2011. At the Colleges, workshops on different aspects of mobile technology have been regularly organized. GTU instructed all affiliated College to set up Mobile and Wireless Technologies Club (MWTC) so that the regular activities in various aspects of mobile technology can be organized.

Overall Activities of the MWTC Club:

- Workshops on application development on various mobile platforms
- Workshops on different aspects of Mobile Technology
- Creating software and hardware for social causes
- Any other relevant activities of interest to students or faculty members

Through **11 workshops/programs** conducted by GTU under MWTC, more than **840 students and professors** participated in various programmes and benefited.

| Event | Total Participants |
|---|--------------------|
| Short Term Training Programme on Mobile Application Development | 150 |
| Two Days Workshop on Mobile Application Development using Android | 100 |
| Two Days Workshop on Mobile Application Development using Android | 100 |
| Two Days Workshop on Mobile Application Development using Android | 80 |
| Two Days Workshop on Mobile Application Development using Android | 70 |
| Android Application Development Workshop | 85 |
| Celebration of Software Freedom Day (SFD) | 41 |
| Workshop on Emerging Research Trends in Mobile Computing and Wireless Technologies | 111 |
| PMO App Development Contest-Ideation Stage | 20 |
| Two Days Workshop on Android & Value addition by Faculty to Meet Industry Requirement | 30 |
| Concluding session of Digital India Week | 53 |
| Total | 840 |