Event Report

1. **Name of Event:** Rapid Prototyping with 3D Printer

2. **Nature of the Event:** Workshop

3. **Date:** 13th October, 2021

4. **Time:** 10:00 A.M. to 04:00 P.M.

5. **Venue:** Auditorium, SoT, GSFC University

6. **Organized by:** GUIITAR Council, Mechanical Engg. - School of Technology, GSFC University, SSIP, IIC and Startup Gujarat

7. **Number of Participants:** 43, Annexure – 1

8. **Speaker Profile:**

   1. Mr. Rudresh Vyas, Head Education, Engineering Technique, Vadodara

   Mr. Rudresh has 27+ years of experience in IT, 3D CAD & 3D Printer (Engineering) Education Industry. He also possesses good knowledge of Software, Hardware and ISO 9000 quality standards mainly in Education and Support Services. For the last 18+ years, he is working as Business Development Manager (West) in the Education area and setting new milestones for the region. He has launched futuristic IT products like Java/Dot Net, Mobile App Development, Cloud programs, 3D Printer and apart from Job/Placement oriented courses promoted the concept of Entrepreneurship / StartUp amongst the students for the last 2 decades.

   2. Mr. Mayur Kachhiya, Head-Engineering & 3D Printing Services, Engineering Technique, Vadodara

   Mr. Mayur has 5+ years of collective experience in Engineering Design, Product Development and Manufacturing Solutions. He is interested in design and advanced manufacturing techniques and exploring & promoting product development from concept to manufacturing level.

9. **Major discussions in the event:**

GUIITAR Council, Mechanical Engg. - School of Technology, GSFC University, Students Startup Innovation Policy (SSIP), Institution's Innovation Council (IIC) and Startup Gujarat organized a workshop on "Rapid Prototyping with 3D Printer" on 13th October, 2021 at 10:00 A.M. to 04:00 P.M. at Auditorium, SoT, GSFC University.

Mr. Kirankumar Parmar, Sr. Manager, GUIITAR Council has welcomed invited speakers, GSFC University Management, CEO-GUIITAR Council, Dean, Associate Deans, Students, Faculty and Participants.

Mr. Kirankumar Parmar has introduced invited speakers Mr. Rudresh Vyas, Head Education, Engineering Technique, Vadodara and Mr. Mayur Kachhiya, Head-Engineering & 3D Printing Services, Engineering Technique, Vadodara to the participants.

Mr. Rudresh Vyas explained Digitalisation by giving examples of tele-communication, signal transmission of television, music, photography, printing etc. in terms of last 5 decades progress. He further explained the Digitalisation of Manufacturing and the difference between 2D Pixel and 3D Voxel. He said now manufacturing is transforming from mass production to mass customization and described Engineering 1.0 to 4.0.

Mr. Rudresh shared the process of manufacturing techniques such as subtractive manufacturing and additive manufacturing. He explained Additive Manufacturing technology in detail and further 3D Printing Technology. He said, nowadays Medicine, Dental, Car, Tire, Aircraft, Toys, Food, Defence, Fashion, Jewellery etc. industry are using 3D printers for their day to day work. He discussed the case study of Instant Shoe Shiner, Titan Watches, Dental Industry, Jewellery Industry and Tourchit (Startup). He also explained how 3D Printers were used to develop various products such as face shields, door opener and swab production.

Mr. Mayur Kachhiya explained the Product Design Workflow to the participants. It will start with a basic idea about the solution/product → Concept Development and Industrial Design→ CAD design → Physical Prototype → Actual Testing → Refinement and Designing → Physical Prototype → Production Ready → Launch. He shared a case study of "Dr. Cardio – A pocket ECG machine" design by using Injection moulding technology vs. 3D Printer Technology.

Mr. Mayur explained the fundamentals of fused deposition modeling (FDM) 3D Printer which is mostly used for prototype development across the world. He shared steps to create CAD file for 3D printing in Solid Work software and printing setting in Ultimaker Cura slicer software. He also shared www.thingiverse.com website for free 3D printer file downloading for practice.

Mr. Mayur explained filament material types, their usage, their strength and how to post-process the 3D printed prototype. He demonstrated various parts, prototypes

and products prepared by using 3D printers. He designed and printed swastika in the 3D printer and demonstrated it to every participant one by one.

Mr. Rudresh Vyas invited students and faculty to visit Engineering Technique, Vadodara for more information and technical help for prototype development.

At the end Dr. Saroj Shekhawat, CEO, GUIITAR Council gave feedback on the workshop and expressed the vote of thanks.

10. Learning outcomes of the event:

Students learnt digitalisation of manufacturing technology, subtractive manufacturing, additive manufacturing, designing of CAD models, working principle of a 3D Printer, Prototype Development, Printing software setting for 3D Printing work, product design workflow and case study of product manufacturing.

11. How will it be useful for Students/School/University:

The workshop benefitted the students to make prototypes by using 3D Printer Technology.

12. Feedback from students and faculty:

Feedback of Students and faculty are enclosed as per Annexure-2

13. Photos:

Participant Details:

Sr. No.	Full Name (Name Fathername Surname	School Name	Division	Sem	Category	Mobile No.	Email Id	Gender
1	Harsh Vipulbhai Shah	SoM, GSFCU	BBA	1	OPEN	7567390929	21bba04010@gsfcuniversity.ac.in	Male
2	Tulsi Pravinsinh Parmar	SoM, GSFCU	BBA	1	OPEN	9510593309	21bba04003@gsfcuniversity.ac.in	Female
3	Raval Jay Rajeshkumar	SoM, GSFCU	BBA	1	OPEN	6352453734	21bba04006@gsfcuniversity.ac.in	Male
4	Kaushik Balvantsinh Chavda	SoM, GSFCU	BBA	1	OPEN	9510115089	21bba04001@gsfcuniversity.ac.in	Male
5	Aswathy Anilkumar	SoS, GSFCU (M.Sc.)	Biotechnology	1	OPEN	9898112149	21msc02002@gsfcuniversity.ac.in	Female
6	Harshi Pankaj Agrawal	SoS, GSFCU (M.Sc.)	Biotechnology	1	OPEN	9407501391	21msc02009@gsfcuniversity.ac.in	Female
7	Akanksha Dogra	SoS, GSFCU (M.Sc.)	Biotechnology	1	OPEN	8140911042	21msc02013@gsfcuniversity.ac.in	Female
8	Zeel Nitin Joshi	SoS, GSFCU (M.Sc.)	Biotechnology	1	OPEN	7490011243	21msc02004@gsfcuniversity.ac.in	Female
9	Maitri Jayeshbhai Pancholi	SoS, GSFCU (M.Sc.)	Biotechnology	1	OPEN	7201800348	21msc02006@gsfcuniversity.ac.in	Female
10	Priyanka Gopal Shivnani	SoS, GSFCU (M.Sc.)	Biotechnology	1	OPEN	7567253407	21msc02008@gsfcuniversity.ac.in	Female
11	Preksha Rajesh Lad	SoS, GSFCU (M.Sc.)	Biotechnology	1	SEBC	9909911856	21msc02005@gsfcuniversity.ac.in	Female
12	Heta Rakesh Pandya	SoS, GSFCU (M.Sc.)	Biotechnology	1	OPEN	9979991793	21msc02003@gsfcuniversity.ac.in	Female
13	Khyati Ashish Shah	SoS, GSFCU (B.Sc.)	Biotechnology	3	OPEN	9157315777	20sc02027@gsfcuniversity.ac.in	Female

14	Murshida Hamidkhan Pathan	SoS, GSFCU (M.Sc.)	Biotechnology	1	OPEN	0756767 8805	21msc02012@ gsfcuniversity.ac.in	Female
15	Heta Rakesh Pandya	SoS, GSFCU (M.Sc.)	Biotechnology	1	OPEN	9979991 793	21msc02003@ gsfcuniversity.ac.in	Female
16	Veera Rahulkumar Patel	SoT, GSFCU	Chemical Engineering	5	OPEN	6354897 360	19bt01044@gsf cuniversity.ac.in	Female
17	Pratham Anand Pathak	SoT, GSFCU	CSE	3	OPEN	7435991 777	prthmpthk777 @gmail.com	Male
18	Tirth Ratnesh Jadvani	SoT, GSFCU	CSE	5	SEBC	9428940 704	19bt04012@gsf cuniversity.ac.in	Male
19	Virajkumar Vinaykumar Patel	SoT, GSFCU	CSE	3	OPEN	8140390 836	20bt04039@gsf cuniversity.ac.in	Male
20	Kruti Vipul Pabari	SoT, GSFCU	CSE	3	OPEN	886y394 945	20bt04027@gsf cuniversity.ac.in	Female
21	Anshita Srivastava	SoT, GSFCU	CSE	3	OPEN	9426354 573	20bt04003@gsf cuniversity.ac.in	Female
22	Virajkumar Vinaykumar Patel	SoT, GSFCU	CSE	3	OPEN	8140390 836	20bt04039@gsf cuniversity.ac.in	Male
23	Harshil Rakesh Bhavsar	SoT, GSFCU	CSE	5	OPEN	9328843 160	19bt04004@gsf cuniversity.ac.in	Male
24	Avanish Deshpande	SoT, GSFCU	CSE	3	OPEN	9619921 462	20bt04006@gsf cuniversity.ac.in	Male
25	Varada Abhay Deshpande	SoT, GSFCU	CSE	3	OPEN	9687349 441	20bt04051@gsf cuniversity.ac.in	Female
26	Devendra RAMKISHORE Sharma	SoT, GSFCU	CSE	3	OPEN	9054897 951	20BT04045@gs fcuniversity.ac.in	Male
27	Renish Vipulbhai Narola	SoT, GSFCU	CSE	3	OPEN	8866929 832	renishnarola70 65@gmail.com	Male

28	Harit Bharatkumar Naik	SoT, GSFCU	CSE	3	OPEN	7600883 013	20bt04023@gsf cuniversity.ac.i n	Male
29	Jyot Nileshbhai Patel	SoT, GSFCU	CSE	3	OPEN	9510836 381	20bt04035@gsfc university.ac.in	Male
30	Harshal Milesh Patel	SoT, GSFCU	CSE	3	OPEN	9327635 787	20bt04034@gsf cuniversity.ac.i n	Male
31	Radhika Rajput	SoT, GSFCU	CSE	3	OPEN	9104031 173	rajputradhika97 23@gmail.com	Female
32	Radhika Jagdishbhai Meghani	SoT, GSFCU	CSE	3	SEBC	9499552 335	20bt04022@gsf cuniversity.ac.i n	Female
33	Apurv Rakesh Chokshi	SoT, GSFCU	CSE	3	OPEN	9429123 014	apurvachokshi2 002@gmail.co m	Male
34	Ashish Kumar Patel	SoT, GSFCU	CSE	3	OPEN	7567956 523	20bt04004@gsf cuniversity.ac.i n	Male
35	Shah Devansh Bhaveshkumar	SoT, GSFCU	CSE	3	OPEN	8154850 006	shahdevansh13 122002@gmail. com	Male
36	Ayush Upendra Chauhan	SoT, GSFCU	CSE	3	SEBC	9510393 178	20bt04009@gsf cuniversity.ac.i n	Male
37	Nishant Hemdev Oza	SoT, GSFCU	CSE	5	OPEN	9016600 523	19BT04028@gs fcuniversity.ac.i n	Male
38	Akshay Kanaiyalal Patel	SoT, GSFCU	CSE	5	OPEN	9925638 795	akshay998patel @gmail.com	Male
39	Darshan Mahendrabhai Golani	SoT, GSFCU	CSE	5	OPEN	7265971 691	darshangolani1 @gmail.com	Male
40	Sija Rajeevan	SoS, GSFCU (M.Sc.)	Indust rial Micro biolog y	1	OPEN	7284939 338	21msc03004@ gsfcuniversity.a c.in	Female
41	Shah Shrey Rupesh Kumar	SoT, GSFCU	Mech. Engg.	7	OPEN	9157911 791	18bt02045@gsf cuniversity.ac.i n	Male

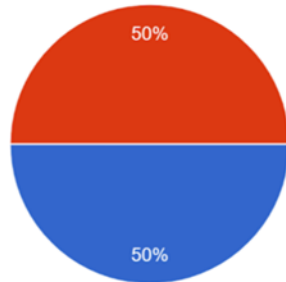| 42	Chirayu Gaur	SoT, GSFCU	Mech. Engg.	5	OPEN	7984731657	19bt02001@gsfcuniversity.ac.in	Male
43	Dutt Kalpeshbhai Parekh	SoT, GSFCU	Mech. Engg.	5	SEBC	9106760063	parekhdutt222@gmail.com	Male

Feedback of Event:

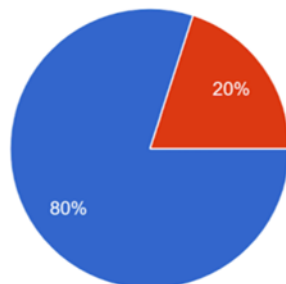The workshop objective were stated clearly and met.

10 responses

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

50%

50%

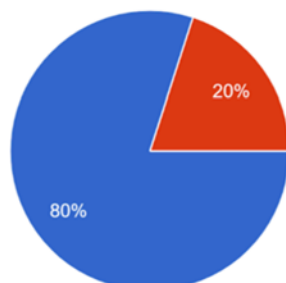The Speaker made the efforts to make me understand the 3D Printing technology.

10 responses

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

20%

80%

The Workshop has increased my knowledge on 3D Printing Technology for Prototype Development.
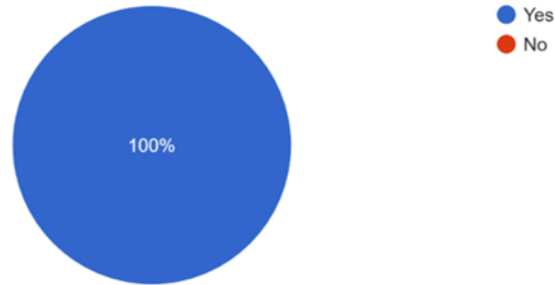
10 responses

- Strongly agree
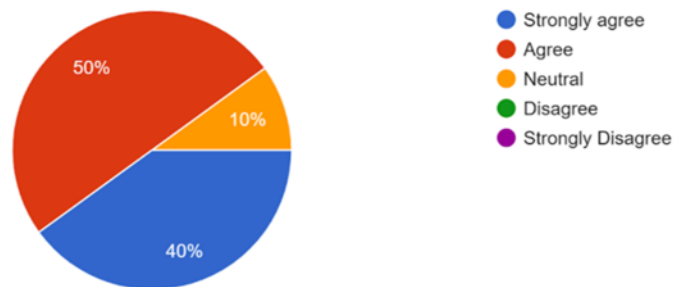- Agree
- Neutral
- Disagree
- Strongly Disagree

20%

80%

Did the workshop help you with new learning's or knowledge?
10 responses

- Yes
- No

100%

This Workshop will be beneficial for me to pursue Innovation and Entrepreneurship in my career.
10 responses

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

50%
10%
40%

Please rate your overall experience.
10 responses

- Excellent
- Good
- Fair
- Poor

40%
60%