



ONE DAY WORKSHOP on **3D-Printing Technology**

On the **03/11/2023**, a one day workshop on 3D-Printing technology & Hands on with Internal Combustion Engine was organized by the Department of Mechanical Engineering and facilitated by Prof. Vikas Sheth and Prof. Nitin Panchal from the Shree Swaminarayan Institute of Technology, Bhat- Gandhinagar for the students of Shree Swaminarayan Polytechnic. Sector 22, Gandhinagar.

The workshop was divided into 2 sessions. The first session was held before lunch. First session was conducted by Prof. Vikas Sheth. He introduced key concepts on Computer Aided Design and 3D printing technology; defining critical terms, capabilities as well as current limitations of limitation of industries.

The second session was conducted by Prof. Nitin Panchal who explained key concepts of Internal Combustion Engine. Basic terminology and recent technologies were also covered during the session. Both the sessions also included multi-media resources to better elucidate key concepts.

At the 8.30 AM onwards, the participants were reached at campus and then after confirming their Presence, they were welcomed by a docket Kit and then moved them to the cafeteria for the High tea and snacks. After 9.15 am all the participants completed their breakfast, they were directed to seminar Hall for welcome speech and introduction to SSIP & SSIT.



Two sessions were conducted in this workshop. CAD and 3D printing was at CAD/CAM Lab, building upon the knowledge and concepts learnt from the expert as basic introduction about CAD modeling, simulation and Analysis. After that session was turned to Terminology of 3D printer and how to operate it. Prof. Vikas Sheth has created 3D Model of Nut & Bolt and then loaded this CAD model in a 3D printer. After a few time a physical 3D printed Prototype part was in the Hand of students. Students got an exclaimed fill on this and got the plenty knowledge of CAD & 3D printing. At the end of session we had conducted a Q & A session to solve their Queries up to 12.00 PM.



After completion of First session, participants were moved to Cafeteria for the Lunch up to 1.00 PM.

On sharp 1.00 PM, students were directed for the Second session, it was conducted by Prof. Nitin Panchal in Internal Combustion Laboratory. As this session was Hands on, Expert had learnt the participants about the working safety parameters, basic hand Tools, power tools and Special Tools. Then a short theoretical session about the engine Geometry and Components have taken to aware them to identify the various engine components on field. After it students were gathering around the Engine Bay and expert had started the stepwise Disassembly of an Engine. The Engine specification is 796 CC, 3 Cylinder, Water cooled Type, and Carburetor operated petrol Engine, manufactured by MARUTI SUZUKI.

After the detailed Disassembly, we have conducted a short quiz to identify a component from all the disassembled components. After it we moved towards the Assembly of an engine and then Ended the session by clearing their Queries.



After completion of both the workshop, all the participants were gathered to Seminar Hall for the Certificate for participation, and feedback from students. Participants gave a huge thank to SSIP & Shree Swaminarayan Institute of Technology for organizing such Technical Informative Workshop.

List of Participants:

SHREE SWAMINARAYAN INSTITUTE OF TECHNOLOGY		
ONE DAY WORKSHOP- MECHANICAL ENGG. DEPARTMENT		
Sr. No.	Enrollment No.	Name
1	199860319027	RANA ILYAS IQBALBHAI
2	209860319004	PANCHAL MAHIR NILESHKUMAR
3	209860319008	PANCHAL HARSHIL NAVINBHAI
4	209860319018	JADAV DHRUV ARJUNSINGH
5	209860319023	SONI PARTHIV RAJESH
6	209860319031	KHUNT VRUSHABH SURESHBHAI
7	219860319001	PATEL VED PRAVINBHAI
8	219860319002	JADEJA LUCKYRAJSINH SUKHDEVSIH
9	219860319003	PATEL DHRUVILKUMAR RAJENDRAKUMAR
10	219860319004	PATEL MANUSH DARSHANKUMAR
11	219860319007	BHANDERI PREYANSH PRAFULBHAI
12	219860319008	SHAIKH ARSHMOHAMMAD AZADMUSTAFA
13	219860319009	PRAJAPATI ANSH BRIJESHKUMAR
14	219860319012	BRAHMBHATT JAY NIKESHBHAI
15	219860319016	CHOSLA HARDIKKUMAR PUNAMBHAI
16	219860319017	TIWARI BHAVIN SHRIVADAN
17	219860319018	AHIRRAO DNYANESHWAR KHEMCHAND
18	219860319021	VAGHELA NARENDRA DASHRATHBHAI
19	219860319023	PARMAR HARDIKKUMAR MAHENDRABHAI
20	219860319026	PATEL PRITESH URVESH
21	219860319030	YADAV YASH SHIVBHOLA
22	219860319033	SINGH ARPIT AJEET

23	219860319040	NINAMA KINJALKUMARI RAMESHKUMAR
24	229868319001	ANSARI SHAHID AHMED RAFIK AHMED
25	229868319002	GADANI KRUNAL KIRANBHAI
26	229868319004	MAKWANA CHIRAGKUMAR NATVARLAL
27	229868319005	MISHRA RAJAN RAMCHANDRA
28	229868319007	PATNI AKASHBHAI DINESHBHAI
29	229868319008	PRAJAPATI SAHIL JITENDRAKUMAR
30	229868319010	SHAH SUBHASH PRAMOD
31	229868319012	SUTHAR MAULIKKUMAR RAMANLAL
32	229868319013	VAGHELA MOHIT RAGHUBHAI
33	229868319014	SINH VINAYKUMAR RAJESH SINH
34	229868319015	ZALA KULDEEP KANUBHAI
35	229868319016	ZALA YOGESHKUMAR KANUBHAI