What is this workshop about?

3D Printing is an Additive Manufacturing technique that creates a physical object from a virtual 3D CAD model by depositing successive layers of material. They work like the traditional inkjet printers, but instead of ink, a 3D printer deposits desired material to manufacture an object from its digital format. 3D printing and rapid prototyping, in general, are widely claimed to have revolutionized not only the manufacturing industry but also many other walks of life like medicine, aerospace and automotive industry. This program on 3D Printing helps the participants understand the design, functioning and operation of a basic 3D Printer.

Course Outcomes

- Learn about the materials, designing of CAD models, working of a 3D Printer
- Understand how to build and calibrate a 3D printer
- Understand the basics of G code generation
- The participants will get 3D printed models that they design

Course Structure

- Introductory lecture on 3D printer and Rapid Prototyping -4hours
 - o Introduction to Rapid prototype
 - o Introduction to different types of 3D Printers
 - o Introduction to RepRap Arduino electronic controller
 - o Materials used for printing
- CAD files 4 hours
 - o Concepts of CAD
 - o Algorithms used in design
 - Design of Assembly (Spur gear, Helical screw, simple design)
- Introduction to G Code 2 hours
- Demonstration of 3D Printer assembly 2 hours

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- Testing and calibration of 3D Printer 2 hours
- Demonstration of 3D Printing 2 hours

Kit Content

3D Printer kit*

* Printer would be provided during the workshop but would be taken back after the workshop. This is being done to reduce the cost of the workshop and make it affordable for students.



Got Quotations? Contact us

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