



**CENTRE OF EXCELLENCE IN MANUFACTURING NATIONAL
INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI**

Rapid Prototyping Lab

Additive Manufacturing

Duration: 8 Hours

PREREQUISITES

Basic understanding of CAD(Computer Aided Design)

WHO SHOULD ATTEND

Students, Engineers and Technicians

Introduction to Additive Manufacturing

2 Hours

Comparison: Subtractive and Additive manufacturing

Additive manufacturing methods: Stereolithography(SLA)-Digital Light processing(DLP)-
Selective Laser Sintering(SLS)-Selective Laser Melting(SLM or LPM)-Fused deposition
Modelling(FDM)

FDM

5 Hours

FDM Materials and Applications: Standard Plastics-Engineering Plastics-High
performance Plastics

Preprocessing Slicers and servers-CAD import-Layer settings-filling pattern-orientation-
Scaling.

FDM printers: Core XY-Core XZ-Printer Hardware's and working principle.

Demonstration

1 Hour

Demonstration with Stratasys F270: Slicing the model-Material Loading-Part placement-
Printing.