

REGISTRATION FORM

Short Term Training Program

BUILD-3DP '19

07.01.2019 to 12.01.2019

Name :
Gender :
Designation :
Institution/Industry :
Educational Qualification :
Experience :
Teaching: :
Industry :
Address for Communication :

Pin :

Accommodation required: Yes / No.

Mobile :

E-mail ID :

DD No.: Date:

Name of Bank: Amount: Rs 2,000/-

Signature of the Participant

Head of the Institute

(Photo copies of the registration form may be used, if needed)

PATRON

Dr. S. Arivazhagan, Principal

CONVENER

Dr. P. Nagaraj, HOD/Mechanical Engg.

WHO CAN ATTEND?

- ✓ Faculty from Engineering colleges
- ✓ Delegates from Industries
- ✓ Research Scholars
- ✓ PG/UG Students from any stream of Engineering

REGISTRATION FEE

Registration fee Rs. 2,000/- per participant shall be paid though a Demand Draft to drawn in favour of *The Principal, Mepco Schlenk Engineering College payable at Sivakasi.*

The registration fee includes course kit, lunch & refreshment.

Seats limited to 25 participants only.

ACCOMMODATION

Hostel accommodation and boarding would be provided with a nominal charge of Rs 100/- per day.

IMPORTANT DATES:

Last date for the receipt of Registration Form along with DD : 03.01.2019

Date of intimation by E-mail : 04.01.2019

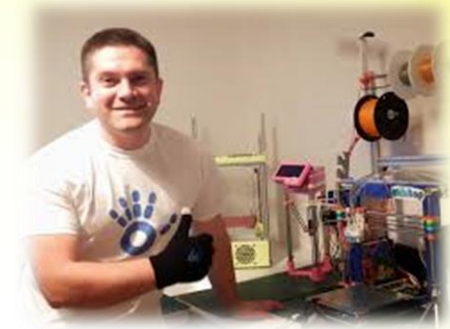
CONTACT DETAILS FOR MAILING (E-mail/Post):

Dr.N.RAJESH JESUDOSS HYNES
Coordinator – BUILD-3DP '19,
Associate Professor/MECH.
Department of Mechanical Engineering,
MepcoSchlenk Engineering College, Sivakasi.
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E-mail ID : findhynes@yahoo.co.in

Short Term Training Program on

Build Your Own 3D Printer (BUILD-3DP '19)

January 7th to 12th, 2019



Co-ordinators

Dr. N. Rajesh Jesudoss Hynes
Mr. D. Jones Joseph Jebaraj



Organized by

DEPARTMENT OF MECHANICAL ENGINEERING
MEPCO SCHLENK ENGINEERING COLLEGE, SIVAKASI
(An Autonomous Institution)
Mepco Engineering College Post - 626 005
Sivakasi, Virudhunagar District, Tamil Nadu.

ABOUT THE INSTITUTION:

Mepco Schlenk Engineering College (Autonomous), Sivakasi is one of the leading institutions in India, towering high in academic excellence and research pursuits ever since its inception on 1984. College is accredited with "A" Grade by National Assessment and Accreditation Council (NAAC) of UGC, New Delhi. The Institute offers under graduate programs in 7 disciplines and post graduate programs in 11 specializations. It has collaborations with leading Industrial, Academic and Research organizations in India and abroad. The college is ISO 9001:2015 certified and all its UG Programs are accredited by NBA under Tier I category. Our College got 5th rank at National-level in Top Engineering Colleges of Eminence category in the CSR-GHRDC Engineering Colleges Survey June 2017 and 29th Rank among National Level Engineering Colleges including IITs, NITs, by Outlook Survey, May 2018.

ABOUT THE DEPARTMENT:

Department of Mechanical Engineering was established in the year 1993 and offers one UG and two PG programmes. It has been recognized as Research Centre to have interaction with Anna University for collaborative research programme which leads to Ph.D. and M.S. degree by research and as Centre of Relevance and Excellence (CORE) on Industrial Safety by DST, TIFAC, New Delhi. The department has under taken projects worth of 3.15 crores from various Govt. and Quasi Govt. Organizations like DRDL, ISRO, DST, AICTE, IEI, MSME, etc.



CONTEXT:

Although stereolithography, the oldest of all 3D printing technologies has been around since 1984, the technology did not grow in a fast pace until the expiry of the FDM patent in 2009. As a result of the expiry, the prices of the 3D printers fell by tenfold enabling developers and DIY enthusiasts access to the technology. The availability of low cost computing facilities, open sourced hardware and software also leveraged the rapid development of FDM printers. In today's scenario, the technology of 3D printing is rapidly growing with multi-facet applications in almost all domains of engineering. 3D printing brings a host of benefits over traditional manufacturing including Customization, Complex Design Outputs, Tool-less Operation, Sustainable and Environmentally Friendly Functioning and very many. Getting to know how to build a 3D printer will enlighten the researchers on the various avenues and help to make ideas into product in a fast pace.

OBJECTIVES:

- To make the participants aware of the 3D printing process.
- To assemble a 3D printer from scratch and get it up and running.
- To learn about the firmware configurations and possible modifications in the printer.

COURSE CONTENTS

INTRODUCTION

- Types of 3D printing and materials used in 3D printing.
- Fused Deposition Modelling machines and their configurations (Cartesian, delta bots, Core-XY, special types)

**3D
PRINTING**



ASSEMBLY OF THE PRINTER

- Information about the parts used.
- Assembly of the frame.
- Mounting the moving parts and mechanisms.
- Electronic parts mounting.
- Electrical connections.
- Organising and tidying up.

FIRMWARE CONFIGURATION

- Configuring the electronics.
- Troubleshooting tips.

FABRICATION

- Connecting to the software.
- Demo of printing using the assembled machine.
- Software available – pros and cons.

STTP HIGHLIGHTS:

- Live demonstration on step by step procedure of building 3D Printer
- Exposure to 3D scanning process & conversion of point cloud to CAD model
- NC codes and code generation
- Basic modelling & exporting the CAD data to the 3D printing software, support structures,
- Building a watertight model & estimation of the part build time
- Hands on experience in 3D Printing open source software

