

**EASWARI ENGINEERING COLLEGE**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**Research Infrastructure and Equipment**

**Building Energy Simulation and Computational Fluid Dynamics  
Laboratory**

This work is initiated on the objective of introducing PCM in the buildings of the future and to provide a user-friendly analysing tool for the building designers. The novelty of the present work is to develop a simulation tool towards designing the PCM integration in building using building simulation software. Creating a simple model from complex simulation will reduce the burden of new users to implement PCM in the buildings and this kind of software, which is not available at present in the national and international scenario, will become very significant.

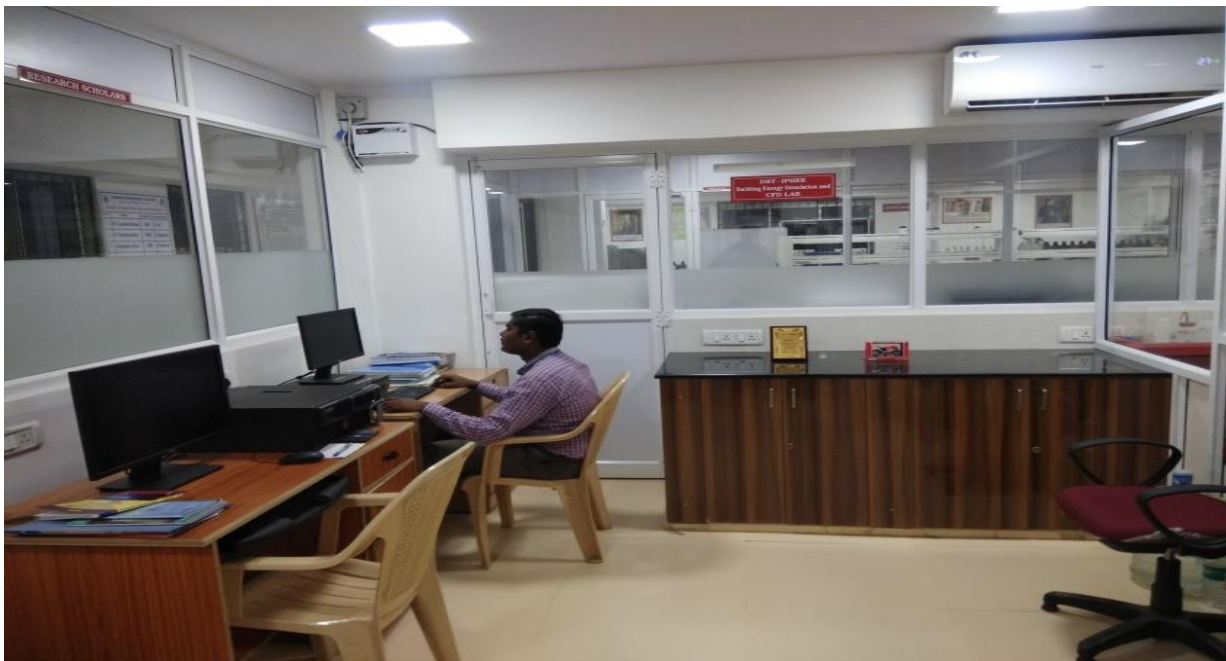
**Technical Details:**

**1. Dell Precision Tower 5810 Workstation**

**Intel Xeon Processor E5-2687W v4 (12C, 3.0GHz,  
3.5GHz Turbo, 2400MHz, 30MB, 160W)**

**2. ANSYS unlimited nodes.**

**3. DESIGN BUILDER SOFTWARE**

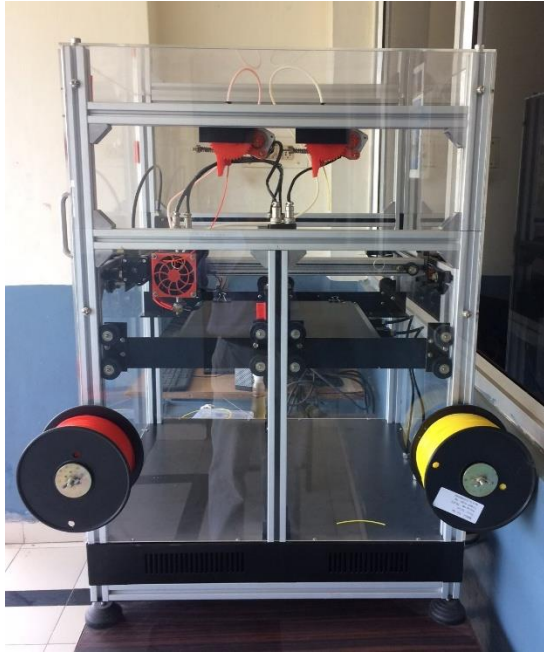


## Digital Manufacturing Lab

### 3D PRINTER

Create mechanical parts with complex shapes that are impossible or difficult to create with other manufacturing methods. Functional prototypes and final products like 3d printed gears, rotors, knobs etc.

#### MODEL: S- 300DH



#### S- 300DH : 3D PRINTER - FEATURES

- Printing Volume ( L x W x H ) mm : 300 x 300 x 300
- Resolution 100 micron
- Dual Head Nozzle
- All Aluminium rugged construction.
- Unique- all metal head extruders - Dual extruders.
- Standalone operation using SD card
- Stationary heater bed for improved accuracy.
- Silent operation.
- Filament sensor to detect error and pause printing.
- Print speed up to 3x.
- Prints with all type of filaments - PLA, ABS, Nylon, HIPS, Lay wood.
- Open frame design for easy removal of large prints.

**IC Engine Lab**

**VCR ENGINE SETUP**



<b>Name of the Equipment</b>	<b>VARIABLE COMPRESSION RATIO ENGINE</b>
<b>Name of the Manufacturer</b>	<b>Kirloskar</b>
<b>Fuel</b>	<b>Diesel</b>
<b>Bore</b>	<b>87 mm</b>
<b>Stroke</b>	<b>110 mm</b>
<b>Power</b>	<b>3.5 Kw</b>
<b>Compression Ratio</b>	<b>12 to 18</b>
<b>Cooling</b>	<b>Water</b>
<b>Speed</b>	<b>1500 rpm</b>
<b>Date of Purchase</b>	<b>28/6/2008</b>
<b>Price of Instrument</b>	<b>Rs. 498375.00</b>