

# BIRLA VISHVAKARMA MAHAVIDYALAYA

(An Autonomous Institution)

## Centre of Excellence

### 1. Centre of Excellence in association with System Level Solution (SLS) India Pvt. Ltd.

#### OBJECTIVES:

- Understand the rudiments of IoT
- Learn the features of NebuLink Gateways
- Configure Wireless Protocols Wi-Fi, Zigbee, Bluetooth, 6LoWPAN
- Familiarize coding structures in C and Python Programming required for IoT
- Interface different sensors with NebuLink Nodes
- Connect NebuLink Gateway to a remote access client via NebuLink Middleware cloud
- Perform Cloud Server Experiments

#### OUTCOMES:

- Produce globally employable innovative engineers with core industrial values
- Bridge the gap between industry and academics
- Train the students and working engineers with the new IoT technologies to get industry ready
- Enable “Make in India” and “Design in India” by “Skill India” initiative

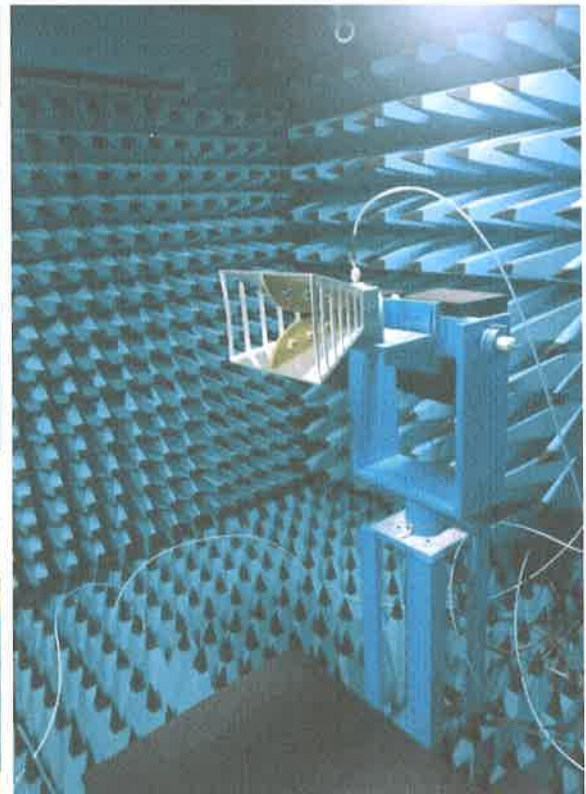


## 2. Centre of Excellence in Electro magnetics & Antenna Research Centre (ELARC)

The ELARC is a Research Laboratory established in the Electronics Department which caters researchers to explore the field of wireless communication with respect to conventional, planar antennas and RF systems including investigations on meta materials, fractals, biological effects, implantable & energy harvesting.

ELARC provides a complete platform for simulation of various antenna designs using HFSS EM simulator version 19.2. The components and antennas designed through software or conventional methods can be fabricated as prototype model using PCB prototyping machine. This machine is capable of engraving, drilling and cutting the shapes of the designed antennas and components using substrate boards such as FR4, Roger etc.

Experimental verification and validation of such antennas, components & RF systems can be carried out using the state-of-the-art measuring instruments such as Vector Network Analyzer in the 1 MHz– 15 GHz, Spectrum Analyzer up-to 15 GHz and



### 3. Centre for Excellence in Super Cell Technology (Super cell Technology With SATT Engineering, Canada)

SATT Group is a leading provider of bi-directional load cells, accessories and field service for loading test companies. The patented load cells, or otherwise named Super-cells, are featured with reliability, loading precision and cost-effectiveness. The field service scope includes planning on loading test, installation of super-cells, telltales and strain gauges, data-collection on site and test result analysis on carrying capacity, distribution of load throughout the drilled shafts, etc.

- Ongoing Projects:
  1. Sabarmati River
  2. GIFT city
  3. Dwarka –bet Dwarka signature Bridge
  4. Mumbai trans harbour line
  5. Navel base, Vishakhapatnam
  6. Silvassa NH flyover
  7. Versova Creek Bridge







## 5. CoE with RED HAT Academy

Charutar Vidya Mandal's Birla Vishvakarma Mahavidyalaya Information Technology Department has signed an MOU with Red Hat academy.

Under its umbrella students are benefited for the following courses.

1. Red Hat System Administration I (RH124)
2. Red Hat System Administration II (RH134)
3. Containers and Kubernetes
4. Open shift

