

Open Course Title: \_\_\_\_\_ **Nano-Electronics and its Applications** \_\_\_\_\_

Target Students from Branches: ECE/TCE/EEE/CSE/Mech

Total duration of the course: 25 Hours.

No. of Lecture hours: \_\_\_\_\_ 17 \_\_\_\_\_

No. of hands on / Practical : \_\_\_\_\_ 8 \_\_\_\_\_

### Abstract

Nanotechnology is one of the frontiers of research today, it is gaining importance mainly because of its wide applications in various fields. This open course on the nanoelectronics and applications focuses on understanding the concepts behind nanotechnology and some of its applications which helps students to start interdisciplinary research.

### Open Course Details

**CO1: To understand the fundamental concept behind nanotechnology.**

**CO2: Apply the concepts of physics to understand the different characterization technique and tools used in nanotechnology**

**CO3: Apply the knowledge of nanotechnology to fabricate electronic devices.**

### Schedule

Day 1:12/02/2019			
Time	Topics	Resource Person Details	CO-PO Mapping
9.30 - 12.30	Introduction to Nanoelectronics	Dr. Daruka Prasad B Associate Professor, BMSIT&M	CO1
2.00 - 4.00	Application of Nano electronics	Dr. Habibuddin Shaik(Ph.D. IISC), Associate Professor, NMIT, Bangalore	CO2-PO2
Day 2:13/02/2019			
Time	Topics	Resource Person Details	CO-PO Mapping
9.30 - 12.30	Application of Nano electronics	Dr. M. Anantha Sunil (Ph.D. IISC), Assistant Professor, BMSCE	CO2-PO2
2.00 - 4.00	Synthesis and characterization of advanced nanomaterials & its white LED applications.	Dr. Dhananjaya N, Associate Professor, BMSIT&M	CO2,5
Day 3:14/02/2019			
Time	Topics	Resource Person Details	CO-PO Mapping
9.30 - 12.30	Nanotechnology		CO2-PO2,5,12

<b>2.00 - 4.00</b>	<b>LAB VISIT (chikkaballapur)</b>		CO2-PO2,5,12
<b>Day 4:15/02/2019</b>			
<b>Time</b>	<b>Topics</b>	<b>Resource Person Details</b>	<b>CO-PO Mapping</b>
<b>9.30 - 12.30</b>	Comparative analysis between FinFET and MOSFET	<b>Prof. Raju Hajare, Associate Professor, BMSIT&amp;M</b>	CO2- PO1
<b>2.00 - 4.00</b>	Fabrication of Solar Cells	<b>Prof. Sabina Rahaman Assistant Professor, BMSIT&amp;M</b>	CO2,3-PO2,5
<b>Day 4:16/02/2019</b>			
<b>Time</b>	<b>Topics</b>	<b>Resource Person Details</b>	<b>CO-PO Mapping</b>
<b>9.30 - 12.30</b>	Next generation MEMORIES	<b>Prof. Jagannath Assistant Professor, BMSIT&amp;M</b>	CO2,3-PO2,5