



KRISHNASAMY COLLEGE OF ENGINEERING & TECHNOLOGY

Approved by AICTE & Affiliated to Anna University

Anand Nagar, Nellikuppam Main Road, Kumarapuram, Cuddalore- 607 109.

Phone no.(04142) 285 601- 604

www.kcet.in

info@kcet.in

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

20.11.2018

(Academic Year 2018-2019)

CIRCULAR

It is planned to conduct a value added course for III & IV year Electrical and Electronics Engineering students on the subject given below. Each module is scheduled from 10.12.2018 to 14.12.2018 The course plan, test procedure, attendance are followed as per Anna University regulation respectively. It is highly advised that the students should attend all the sessions and get benefited of the course.

The syllabus for the same has been formulated and will be circulated to students. The eminent staff from our department is invited to give lectures on topics from syllabus.

S.No	Year	Code/Name of the subject	Duration in Hours	Subject Incharge
1	IV	VAC1801/Fundamentals of Nano-Science	30	Er.R.Srinivasan ASP/EEE
2	III	VAC1802/AI applications to Power Systems.	30	Er.N.Purushothaman AP/EEE


HOD 20/11/18

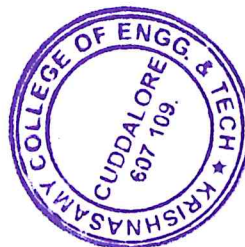

20/11/18
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PRINCIPAL

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Class Room

Class In charge





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SYLLABUS

Subject Code: VAC1801

Subject Name: Fundamentals of Nano - Science

Duration: 30 Hours

Objectives:

The main objective is to learn about basis of nonmaterial science, preparation method, types and application. The main goal of Nano-science industry is to ensure that proper preparation method is carried out and are successfully completed within the constraints of best quality, and at minimum possible cost.

Module 1:

Classifications of nanostructure materials- Nano particles- quantum dots, nano wires- Mechanical, Electronic, Optical, Magnetic and Thermal properties.

Module 2:

Bottom-up Synthesis-Top-down Approach: Co-Precipitation, Ultra sonication, Mechanical Milling, Colloidal routes .

Module 3:

Nano metal oxides-ZnO, TiO₂, MgO, ZrO₂, NiO, Nano alumina, CaO, AgTiO₂, Ferrites, Nano clays functionalization .

Module 4:

X-ray diffraction technique, Scanning Electron Microscopy - environmental techniques, Transmission Electron Microscopy including high-resolution imaging.

Module 5:

Nanosensors, Nano crystalline silver for bacterial inhibition, Nanoparticles for Sunbarrier products - In Photostat, printing, solar cell, battery.





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COURSE OUTCOMES:

- Familiarity with working principles, tools and techniques in the field of nanomaterials
- Understanding of the strengths, limitations and potential uses of nanomaterials.

TEXT BOOKS:

1. A. L. Rogach, Semiconductor nanocrystal quantum dots synthesis, assembly, spectroscopy and applications (Springer, Wien; London, 2008).
2. E. Gazit, Plenty of room for biology at the bottom: an introduction to bionanotechnology (Imperial College Press ; Distributed by World Scientific Pub. in the USA, London : Hackensack, NJ, 2007)..




HOD/EEE 19/11/18