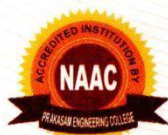




**Department of ECE**  
**Summary Sheet of VALUE ADD COURSES**  
**ACADEMIC YEAR 2020-21**

| S. No | Name of the workshop/ Seminar/ Conference     | Type of the Event  | Resource Person Details | Number Of Participants | Course No                       | Date From-To             |
|-------|---|--------------------|-------------------------|------------------------|---------------------------------|--------------------------|
| 1     | CYBER ATTACK DETECTION AND PREVENTION SYSTEMS | VALUE ADDED COURSE | Dr. K. SUBBA Reddy      | 90                     | 2020-21/PEC/ECE/IVYEAR/VAC001   | 01-02-2021 to 06-02-2021 |
| 2     | NANO ELECTRONICS                              | VALUE ADDED COURSE | Dr. V. Venkata Reddy    | 100                    | 2020-21/PEC/ECE/III YEAR/VAC002 | 05-04-2021 to 10-04-2021 |
| 3     | PCB DESIGN AND ITS APPLICATIONS               | VALUE ADDED COURSE | Mr. S. SAI SANDEEP      | 90                     | 2020-21/PEC/ECE/II YEAR/VAC003  | 17-05-2021 to 22-05-2021 |





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ENGINEERING COLLEGE

**Department of ECE**  
**BROCHERS of VALUE ADDED COURSES conducted in Academic year 2020-21**

**BROCHER**

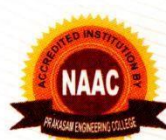
**CYBER ATTACK DETECTION AND PREVENTION SYSTEMS 01-02-2021 to 06-02-2021**

|  |   |
|--|---|
| <p align="center"><b>CHIEF PATRON</b><br/>Dr.K.Ramaiah<br/>Secretary &amp; correspondent<br/>Prakasam Engineering college Kandukur</p> <p align="center"><b>PATRON</b><br/>Dr.CH.Ravi Kumar, M.Tech., Ph.D.<br/>Principal<br/>Prakasam Engineering college Kandukur</p> <p align="center"><b>CONVENER</b><br/>Dr.K.Hanumantha Rao, M.Tech., Ph.D.<br/>Head of Department<br/>Department of Electronics and Communication Engineering<br/>Prakasam Engineering college, Kandukur</p> <p align="center"><b>Co-Ordinator</b><br/>Mr.K.SRIKANTH, M.Tech.<br/>Assistant Professor</p> | <div align="right"> </div> <p align="center"><b>CS</b><br/>5M</p> <p align="center"><b>VAC001 - CYSBER SECURITY</b><br/>01.02.2021-06.02.2021<br/><i>Organized by</i><br/><b>Electronics and Communication Engineering</b></p> <div align="center"> </div> <p align="center"><b>venue: PEC 1/5/SEMINAR-2 HALL</b></p> <p>For any details, please contact<br/>Course in-charge<br/>Mr.K.SRIKANTH, M.Tech.<br/>Assistant Professor<br/>9441854711</p> |
|--|---|

|  |  |
|--|--|
| <p align="center"><b>COURSE OBJECTIVES</b></p> <p>To understand the intrusion detection and prevention technologies, various types of network behavior analysis.</p> <p align="center"><b>COURSE OUTCOMES (COS)</b></p> <p>At the end of the course, student will be able to</p> <ol style="list-style-type: none"> <li>1. Introduction to IDPS IDPS Technologies, Components and Architecture.</li> <li>2. Analyze and handle the inter-conversions between signals.</li> <li>3. Design systems involving mixed signals.</li> </ol> <p align="center"><b>EMENANT SPEAKER</b><br/>Mr.K.Subba Reddy<br/>HOD of CSE- AI,<br/>Prakasam Engineering College<br/>Kandukur</p> | <p align="center"><b>CONTENT</b></p> <ul style="list-style-type: none"> <li>➤ Host and Network IDPS 4 hours Application, Transport, Network and Hardware Layer attacks, Sniffing Networks</li> <li>➤ Traffic, Replay Attacks, Command Injection, Internet Control Message Protocol Redirect, DDoS</li> <li>➤ Physical Design, Verification, Design Management</li> <li>➤ III High Level Synthesis : Introduction to Synthesis,</li> <li>➤ Dangers and defenses with Man-in-the Middle</li> <li>➤ Background images, colors and properties, manipulating texts, using fonts</li> <li>➤ Network Behaviour Analysis Components and Architecture Typical</li> <li>➤ Network Architecture,</li> <li>➤ Honeynets- Gen I, II and III, Honeymole</li> <li>➤ Monitoring on the box, Setting up the Realistic</li> <li>➤ The Snort Configuration File</li> <li>➤ Preprocessors and Output Modules</li> </ul> |
|--|--|

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## NANO ELECTRONICS 05-04-2021 to 10-04-2021

### CHIEF PATRON

**Dr.K.Ramaiah**

Secretary & correspondent  
Prakasam Engineering college Kandukur

### PATRON

**Dr.CH.Ravi Kumar** M.Tech., Ph.D.  
Principal

Prakasam Engineering college Kandukur

### CONVENER

**Dr.K.Hanumantha Rao** M.Tech., Ph.D.  
Head of Department

Department of Electronics and Communication Engineering  
Prakasam Engineering college, Kandukur

### Co-Ordinator

**Mr.G.Suresh** M.Tech.  
Associate Professor



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### Nano Electronics

SN

VAC002- Nano Electronics

05.04.2021-10.04.2021

Organized by

Electronics and Communication Engineering



venue:PEC 1/5/SEMINAR-2 HALL

For any details, please contact

Course in-charge  
**Mr.G.Suresh** M.Tech.  
Associate Professor  
9985191866

## COURSE OBJECTIVES

To convey the basic concepts of Nano electronics to engineering students with no background in quantum mechanics and statistical mechanics

### COURSE OUTCOMES (COS)

1. Establishing infrastructure and simulations.
2. Establishing infrastructure and simulations.
3. This subject gives idea about the role and importance of the Nano electronic devices.
4. . Recent technology proceeds with MOSFET
- 5.The content of this course gives platform to the Nano electronics

### EMENANT SPEAKER

Mr.V.Venkata Reddy  
HOD OF ECE & Associate Professor  
VIGNAN UNIVERSITY, GUNTUR

## CONTENT

- Introduction to nanotechnology, Nano devices, Nano materials, Nano characterization, Definition of Technology node
- Overview Nano Technology and Basics of Quantum Mechanics.
  - Basic CMOS Process flow, meso structures
  - Dr. Babasaheb Ambedkar Technological
  - 80 Basics of Quantum Mechanics: Schrodinger equation, Density of States,
  - Basics of data converters;
  - Successive approximation ADCs, Dual slope ADCs,
  - Degeneracy, Band Theory of Solids
  - Shrink-down approaches
  - Introduction, CMOS Scaling, The nanoscale MOSFET, Finfets
  - limits to scaling, system integration limits (interconnect issues etc.)
  - Resonant Tunneling Diode
  - Nano electronics Semiconductor devices
  - Quantum blockad
  - Band structure and transports.
- Characterization techniques for Nano materials
- Preprocessors and Output Modules



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## BROCHER

PCB DESIGN AND ITS APPLICATIONS 17-05-2021 to 22-05-2021

### CHIEF PATRON

**Dr.K.Ramaiah**

Secretary & correspondant  
Prakasam Engineering college Kandukur

### PATRON

**Dr.CH.Ravi Kumar** M.Tech., Ph.D.  
Principal

Prakasam Engineering college Kandukur

### CONVENER

**Dr.K.Hanumantha Rao** M.Tech., Ph.D.

Head of Department  
Department of Electronics and Communication Engineering  
Prakasam Engineering college, Kandukur

### Co-Ordinator

**Mr.G.Suresh** M.Tech.  
Associate Professor



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### PCB Design

EN

VAC003- PCB Design

17.05.2021-22.05.2021

Organized by

Electronics and Communication Engineering



venue: PEC 1/5/SEMINAR-2 HALL

For any deails, please contact

Course in-charge  
**Mr.G.Suresh** M.Tech.  
Associate Professor  
9985191866

## COURSE OBJECTIVES

This course will teach teams of students how to design and fabricate PCB for prototyping as well as in Industrial Production environment.

### COURSE OUTCOMES (COS)

At the end of the course, Students can able to

1. Establishing infrastructure and simulations
2. Concept of programming the in WSN environment
3. The students will be able to
4. Understand a single layer and multilayer PCB
5. Create and fabricate a PCB
6. Evaluate and test a PCB

### EMENANT SPEAKER

**Mr.S.SAI SAN DEEP**  
VISH ISHTA I N NOVATORS,PVT  
PROJ ECT MANAGER,GU NTU R

## CONTENT

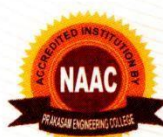
- Need for PCB, Types of PCBs : Single and Multilayer, Technology: Plated Through Hole, Surface Mount, PCB Material
- Electronic Component packaging, PCB Designing, Fabrication, Production.
- Proprietary tools like Eagle, Ultiboard, Orcad and Opensource
- At the end of the course, Students can able to
- Transmission line
- Forms
- Cross talk and Thermal management
- Introduction to KiCad, Schematic entry / drawing,
- layering, component foot print library
- design rules, component placing: Manual & automatic, track routing
- track length, angle, joint & size,
- Autorouter setup
- IPC standards for schematic
- material and documentation
- CNC Machine, Photo-Lithography process
- PCB Mass Manufacturing Process: Gerber Generation,
- CAM, panelization, cleaning, drilling,
- automated optical inspection



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