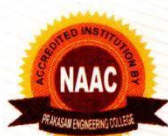




**Department of ECE**  
**Summary Sheet of VALUE ADD COURSES**  
**ACADEMIC YEAR 2021-22**

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	2022-23/PEC/ECE/IVYEAR/VAAC001	06-02-2023 to 11-02-2023
2	5G COMMUNICATIONS	VALUE ADDED COURSE	Dr. P. PRASANNA MURALI KRISHNA	90	2022-23/PEC/ECE/IVYEAR/VAAC002	20-03-2023 to 25-03-2023
3	AUDINO BASED EMBEDDED SYSTEMS	VALUE ADDED COURSE	Dr. Ch.Venu Gopal Reddy	100	2022-23/PEC/ECE/IVYEAR/VAAC003	07-11-2022 to 12-11-2022





**PRAKASAM**  
ENGINEERING COLLEGE

**Department of ECE**  
**BROCHERS of VALUE ADDED COURSES conducted in Academic year 2021-22**

**BROCHER**

**CYBER ATTACK DETECTION AND PREVENTION SYSTEMS 06-02-2023 to 11-02-2023**

<p align="center"><b>CHIEF PATRON</b> Dr.K.Ramaiah Secretary &amp; correspondant Prakasam Engineering college Kandukur</p> <p align="center"><b>PATRON</b> Dr.CH.Ravi Kumar M.Tech, Ph.D. Principal Prakasam Engineering college Kandukur</p> <p align="center"><b>CONVENER</b> Dr.K.Hanumantha Rao M.Tech, Ph.D. Head of Department Department of Electronics and Communication Engineering Prakasam Engineering college, Kandukur</p> <p align="center"><b>Co-Ordinator</b> Mr.K.SRIKANTH M.Tech. Assistant Professor</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> <div> <p><b>PRAKASAM</b> ENGINEERING COLLEGE</p> <p><small>Approved by AICTE, New Delhi / Affiliated to JNTU - Kakinada</small></p> </div> </div> <p align="center"><b>CS</b> SEM</p> <p align="center"><b>VAC001 - CYSBER SECURITY</b> 06-02-2023 to 11-02-2023</p> <p align="center"><i>Organized by</i> <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><b>For any deals, please contact</b> Course in-charge <b>Mr.K.SRIKANTH</b> M.Tech. Assistant Professor 9441884711</p>
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<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></p> <p align="center">Mr.K.Subba Reddy HOD of CSE- AI, Prakasam Engineering College 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 Middles</li> <li>➤ Background images, colors and properties, manipulating texts, using fonts</li> <li>➤ Network Behaviour Analysis Components and Architecture Typicals</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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## BROCHER

5G COMMUNICATIONS 20-03-2023 to 25-03-2023

### 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.S.MADHAVA RAO** M.Tech.  
Associate Professor



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## 5G COMMUNICATIONS

ON

**VAC00 1 - 5G COMMUNICATIONS**

20-03-2023 to 25-03-2023

*Organized by*

**Electronics and Communication Engineering**



**venue:PEC 1/5/SEMINAR-2 HALL**

**For any details, please contact**

Course in-charge  
**Mr.S.MADHAVA RAO** M.Tech.  
Associate Professor  
8886747999

## COURSE OBJECTIVES

The aim of this course is to let the students understand that air Interface is one of the most important elements that differentiate between 2G, 3G, 4G and 5G. While 3G was CDMA based, 4G was OFDMA based

## COURSE OUTCOMES (COS)

At the end of the course, Students can able to

1. Identity suitable modern equipment 's for planning and data processing to meet the industrial applications
2. Ability to use the various Accessories instruments and known its application and limitation

## EMENANT SPEAKER

**Dr. P. PRASANNA MURALI KRISHNA**  
HOD OF ECE AND PROFESSOR  
KITS College MARKAPUR

## CONTENT

- Concept of Modeling requirements and scenarios
- Channel model requirements, Propagation scenarios
- Relaying multi-hop and cooperative communications: Principles of relaying
- Introduction to Multi-antenna Systems, Motivation, Types of multi-antenna systems
- Diversity, Exploiting multipath diversity, Transmit diversity, Space-time codes
- Space-frequency codes, Receive diversity, The rake receiver
- Introduction, NFV and SDN, Basics about RAN architecture
- High-level requirements for the 5G architecture, Functional architecture and 5G flexibility
- Enhanced Multi RAT coordination features, Physical architecture and 5G deployment
- Access design principles for multi-user communications, Orthogonal multiple-access systems, Spread spectrum multiple access systems
- Capacity limits of multiple-access methods, Sparse code multiple access (SCMA), Interleave division multiple access (IDMA)
- Radio access for massive machine type communication, Network deployment types, Ultra-dense network or densification, Moving networks
- Heterogeneous networks, Interference management in 5G
- Interference management in UDN, Interference management for moving relay nodes
- Interference cancellation, mobility management in 5G
- User equipment controlled versus network-controlled



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## BROCHER

AUDINO BASED EMBEDDED SYSTEMS 07-11-2022 to 12-11-2022

### 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.I .RAMA KOTESWARA RAO** M.Tech.  
Associate Professor



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## AUDINO BASED EMBEDDED SYSTEMS

ON

VAC00 3 - Arduino based Embedded System Design  
07-11-2022 - 12-11-2022

Organized by

Electronics and Communication Engineering



venue: PEC 1/5/SEMINAR-2 HALL

For any deails, please contact

Course in-charge  
**Mr.I .RAMA KOTESWARA RAO** M.Tech.  
Associate Professor  
9848622648

## COURSE OBJECTIVES

The aim of this course is to let the students understand that Hardware Architecture of Arduino. Programming Tools of Arduino. Design development process for Specific Applications

## COURSE OUTCOMES (COS)

At the end of the course, Students can able to

- 1.Design and validate the interfacing of different Sensors with Arduino
- 2.Design hardware and software for specific application using Arduino
- 3.Development of algorithm for Traffic Light Control

## EMENANT SPEAKER

Dr. Ch.Venu Gopal Reddy  
HOD OF ECE AND PROFESSOR  
RISE KRISHNA SAI PRAKASAM, ONGOLE

## CONTENT

- ARCHITECTURE REVIEW OF ARDUINO UNO BOARD
- I/O ports Capability of Arudino Uno-ADC & its features
- Interfacing of Digital Input (LED) and output devices(Switch)-Interfacing of Current sensor and LCD
- EMBEDDED C PROGRAMMING FOR ARDUINO
- Variables, Looping statements, Logical Operators, Mathematical operators, Programming with Arduino IDE, Compiling and Debugging using IDE
- DESIGN OF REAL TIME DIGITAL CLOCK USING ARDUINO
- Preparation of Bill of materials, Selection of Displays
- Design of Drivers for LED display, Development of algorithm
- Add on functions
- DEIGN OF ROOM TEMPERATURE MONITOR & VISITOR COUNTER
- Development of algorithm for monitoring and counting
- DESIGN OF TRAFFIC LIGHT CONTROLLER
- Preparation of Bill of materials, Selection of Sensors
- Development of algorithm for Traffic Light Control



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