



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA**

**UNIVERSITY COLLEGE OF ENGINEERING, VIZIANAGARAM**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**



# ECENTRA

**A TWO-DAY NATIONAL LEVEL TECHNICAL SYMPOSIUM**

**INDUSTRIAL HYDRAULIC SYSTEM & CONTROL**



## **ABOUT THE WORKSHOP :-**

Hydraulic is a technology and applied science using engineering, chemistry, and other sciences involving the mechanical properties and use of liquids or fluids. At a very basic level, hydraulics is the liquid version of pneumatics. Fluid mechanics provides the theoretical foundation for hydraulics, which focuses on the applied engineering using the properties of fluids. In fluid power, hydraulics are used for the generation, control, and transmission of power by the use of pressurized liquids. All these are related to each other and interlinked with industries.

## **PREREQUISITES :-**

- General mechanical engineering background
- Basics of hydraulic technology

## **DAY 1**

### **SESSION 1**

- Introduction to Industrial System
- Hydraulic world
- Need of Hydraulics in our daily life
- What is Hydraulics'?
- Physical fundamentals and principles

### **SESSION 2**

- Hydraulic components.
- Pumps.
- Motors.
- Cylinders.

- Valves.
- Directional, pressure,
- Flow; accessories.

## DAY 2

### **SESSION 3**

- Fluid power symbols as per Basic hydraulic circuits Instructions.
- Guidance.
- Review for Practical hydraulic aspects Techniques of assembly.
- Disassembly and conversion;
- Possibilities for handling and setting of typical components.
- Practice by self-trial of Circuit making on demonstration power pack Instructions on storage.
- Commissioning.
- Trouble shooting,
- Maintenance and Safety.

### **SESSION 4 :-**

Complete real life simulation on the industrial hydraulic software worth of more than 50 lakh.

In the software students will learn the live working of the each components

## **WORKSHOP DETAILS**

### **WORKSHOP FEE**

- 800/- per member.
- Each team should have maximum of 5 members (4000/- per team).

### **LAPTOP NEEDED**

- Yes, every team should carry their laptop. Software will be provided at the time of workshop.

### **LEARNING OUTCOMES:-**

- Get complete knowledge on hydraulics and fluid power systems.
- Get live working experience with the real life components in the software.
- If your performance is good, then you'll be offered an "Internship" in 'SPMH Company'.

## **CO-ORDINATORS**

- G.BHAGATH - 8466082021
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