



SRI VASAVI ENGINEERING COLLEGE (AUTONOMOUS)

(Sponsored by Sri Vasavi Educational Society)

Approved by AICTE, New Delhi and Permanently Affiliated to JNTUK, Kakinada
Pedatadepalli, **TADEPALLIGUDEM – 534 101**, W.G. Dist, (A.P.)

Department of Electronics and Communication Engineering

SVEC/ECE/Office/Circular/2019-20/ 19

Dt: 2-12-2019

CIRCULAR

Under the aegis of SPDP Centre (Sponsored by AICTE) , a 20 hour (One hour per Day) Training Program on “ **Embedded Systems & IoT**” will be Conducted by ECE department exclusively for SC, ST students of our college from 09-12-2019 onwards between 5p.m to 6 p.m. Interested Students need to register through the link provided in our college website. The First 20 registrations will be accepted.

Head of the Department

Note: Course Details are given below.

Vision:

To develop the department into a centre of excellence and produce high quality, technically competent and responsible Electronics and Communication Engineers.

Mission:

- To create a learner centric environment that promotes the intellectual growth of the students.
- To develop linkages with R & D organizations and educational institutions for excellence in teaching, learning and consultancy practices.
- To build the student community with high ethical standards.

Schedule For 20 -Hour SPDP Programme

on

FUNDAMENTALS OF EMBEDDED SYSTEMS & IOT

Day 1:

Introduction to Embedded Systems

Applications of Embedded Systems

Advantages & Disadvantages

Development boards-Types and Use cases

Day 2:

Architecture of Arduino Development Board

Pin diagram of Arduino Development Board

Introduction to Arduino IDE, Installation Procedure

Program Structure, Libraries etc.,

Sample Programs

Day 3:

Working Principle of Push Buttons, LEDs & Piezo Buzzers

Interfacing push buttons, LEDs & Piezo Buzzers with Arduino

Delay Programming

Day 4:

Types of Sensors and applications

Working Principle of IR Sensors

Mini Project

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Day 5:

Working Principle of Ultrasonic Sensor

Interfacing Ultrasonic sensor with Arduino

Obstacle Distance measurement

Day 6:

Working principle of Analog Joystick

Interfacing Joystick to Arduino

Controlling LEDs with Joystick

Day 7:

Working Principle of LCD

Interfacing LCD to Arduino

Testing various LCD commands

Day 8:

Working Principle of DC Motors, Motor Driver Module

Interfacing DC Motors with Arduino

Direction and Speed Control of dc motors using Arduino

Day 9:

Working Principle of Servo Motor

Interfacing Servo Motor with Arduino

Mini Project

Day 10:

Mini Projects

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Day 11:

Introduction to Internet of Things

Architecture of IoT, Applications, Advantages & Threats

Day 12:

Architecture of Embedded development platform

Understanding Pin outs and interfacing

Day 13:

Working principle of LDR sensor

Interfacing LDR and controlling LEDs to Development board

Day 14:

Working Principle of Humidity & Temperature sensor

Interfacing DHT sensor with Development Board

Day 15:

Working Principle of Gas Sensor

Interfacing DHT sensor with Development Board

Day 16:

Introduction to Cloud & Cloud Servers (Web & Mobile Apps)

Creating Account and channel

Day 17:

Sensor-1 data upload to cloud & analyze it

Day 18:

Sensor-2 data upload to cloud & analyze

Day 19:

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Sensor-3 data upload to cloud & analyze

Day 20:

Live Project: Multiple sensor data upload and control

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