# Sri Vasavi Engineering College, Tadepalligudem

### **APSSDC Program Report**

Date: 26-02-2022

Name of the Department: ECE

Name of the course/Workshop: Arduino with scratch

Duration with Dates: 1 WEEK for each section

ECE A SECTION: 6 days from 7-2-2022 TO 12-2-2022

ECE B SECTION: 6 days from 14-2-2022 TO 19-2-2022

ECE C SECTION: 6 days from 17-1-2022 TO 22-1-2022

ECT SECTION: 6 days from 24-1-2022 TO 29-1-2022

### **Resource Persons:**

- Mr.Ch.Santhosh, APSSDC
- Mr.Bhanu Chandar Reddy.T, APSSDC
- Mr.B Nagaraju, APSSDC

The Arduino with scratch was the course offered by APSSDC, for ECE and EEE students and was very useful for beginners. Students learned, how to work in Arduino IDE and simple interfacing circuits using Arduino. APSSDC provided Arduino boards and various sensors for student practice.

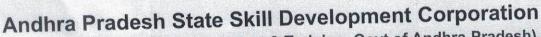
No. of students participated: ECE A, ECE B, ECE C and ECT-240

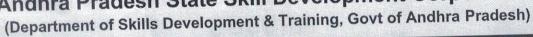
**Course Content: Enclosed.** 

APSSDC Co-ordinator: Dr.M.Thamarai



# **APSSDC**









ARDUINO WITH SCRATCH

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# Andhra Pradesh State Skill Development Corporation



(Department of Skills Development and Training, Govt of Andhra Pradesh)

### Introduction:

This course aims at attracting people to the programming world. The goal is also to provide a high level interface to Arduino programmers with functionalities such as interacting with a set of boards through user events.S4A is a scratch modification that allows for simple programming of the Arduino open source hardware platform

# **Hardware Requirements:**

- i3 or above Processor is required
- 4 GB RAM is recommended
- Good Internet Connectivity
- Microphone and Speakers facility for Offline training program.

## **Software Requirements:**

- -S4a software
- -Arduino IDE

### **Duration**:

18 Hours (6 hours each day X 3 days)

### Syllabus:

- 1. Introduction to Scratch programming.
- -Example Programming on Scratch programming
  - a. Led Based
  - b. Button
  - c. Servo Motor Based
- 2. Introduction to Integrated Development Environment
  - a. Arduino IDE
- 3. I/O of Arduino
  - a. Digital Input
  - b. Digital output
  - c. Analog Input
  - d. Analog Output
- 4. Serial Communication with Arduino

## **APSSDC**



# Andhra Pradesh State Skill Development Corporation



(Department of Skills Development and Training, Govt of Andhra Pradesh)

- 5. Motor Interfacing with Arduino
  - a. Simple DC Motor Interfacing
  - b. Servo Motor Interfacing
- 6. IR Sensor interfacing with arduino
- 7.LDR sensor interfacing with arduino
- 8.LDR with IR interfacing with arduino
- 9.RGB interfacing with arduino

### Components required:

- 1. Arduino UNO
- 2. Led-5
- 3. 220-ohm Resistors -5
- 4. 10K resistors -2
- 5. pushbuttons 2
- 6. Ultrasonic Sensor
- 7. Bread Board
- 8. LDR
- 9. IR Sensor
- 10. Servo 90g
- 11. 1293d motor Driver
- 12. DC motors 5v -2
- 13. Jumper Wires

### **Course Objectives:**

- 1. Computational Thinking-scratch
- 2. Attracting students to the programming world
- 3.Introducing easy way to interact with the real world
- 4. Basic Hardware Knowledge

### **Entry Requirements:**

basic knowledge on 'C'

### **Eligibility:**

Polytechnic 1<sup>st</sup>,2<sup>nd</sup>,3<sup>rd</sup> year and engineering 1<sup>st</sup> year students.

### **Mode Of Training:**

Offline (Completely Hands on Training)



# SRI VA ... ENGINEERING COLLEGE (AUT NOMOUS)

Fedatadepalli, TADEPALLIGUDEM-534 101, W.G. District, (A.P.) Approved By AICTE., Affiliated to JNTUK, Kakinada

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## SRI VASAVI ENGINEERING COLLEGE (AUTONOMOUS)

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Pedatadepalli, TADEPALLIGUDEM - 534 101. W.G.Dist. (A.P)

### Department of Electronics and Communication Engineering

	TRAINER FEEDBACK
Name of the Trainer(s)	CH. Santhorh
Designation	Technical Skill trainer
Institution/University/Organization	APSSDC
Title of the Training Program	· Addino with scratch.
Date & Time	7-2-22 to 12-2-22
Venue	Srivosavi college
Beneficiary	
Comments Speaker(s)	
Signature	ch. Sallage

Name of faculty who offered feedback (feedback enclosed):

- 1.
- 3.
- 4.

Convener

Head of the Department

### 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.



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Department of Electronics & Communication Engineering

### WORKSHOP EVALUATION FORM

Please fill out this form and return to the Department. This form is only used to evaluate the quality/value of the trainers.

Trainer Name: CH. Santosh

Workshop Name: Arduino with scratch

Date & Time: 11 2 2021, 2:30 PM

Name of the

Organisation: APSSDC.

Branch: ECE

Name of the Student &	Reg.	No: 4.	Sai	Man	SWIN	de	20A8	MA	041	63
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(1) The Trainers communicated at an appropriate level for the course. (4)

(2) The Trainers did a good job of relating course concepts to the real world. [4]

(3) The Trainers demonstrated a thorough knowledge of the subject. [4]

(4) The Trainers were well prepared. [4]

(5) The Trainers made the class valuable. [4]

(6) Overall, these Trainers were:

3 Excellent Good Superior Average

Suggestions (if any):

Y. Sai Manaswini Signature of the Student

Vision:

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