

SRI BHARATHI

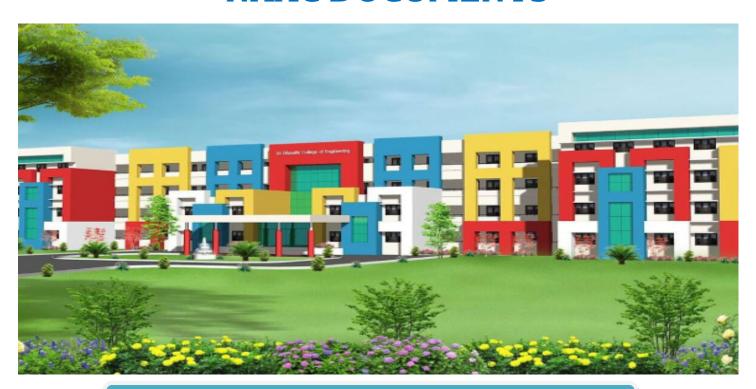
ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Kaikkurichi, Pudukkottai -622 303

www.sbec.edu.in

NAAC DOCUMENTS



Quality Indicator Frame Work

Criterion – 1 CURRICULAR ASPECTS

Submitted by

IQAC
Internal Quality Assurance Cell

Sri Bharathi Engineering College for Women



Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25) KAIKKURUCHI, PUDUKOTTAI – 622 303

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2019-2020 / EVEN SEMESTER

1.2 Academic Flexibility (30)

1.2.1 Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)

AND

1.2.2 Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

| VAC Title: | LEA | LEARNING ARDUINO PLATFORM AND ITS USES | | | | | | | | | | |
|---|---------|--|------------|---|-------|-------------|-----------|----------|----|--|--|--|
| Resource Person: Embedded Deloevper, Galwin Technology, Trichy-620 002. | | | | | | | | | | | | |
| Date of cond | uct fro | m: | 9.12.2019 | 19 To: 14.12.2019 Duration: 36 | | | | | | | | |
| Organized D | epartm | ent: | ELECTI | RONICS AN | D COM | 1MUN | ICATION E | NGINEERI | NG | | | |
| Participant Y | ear: | 2/3/4 | | Semester: EVEN No. of Students Registered: 46 | | | | | | | | |
| Venue: Se | minar l | Hall, ,G | Fround Flo | or, SBECW | | | | | | | | |

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2019-2020/EVEN SEMESTER

DEPARTMENT CIRCULAR

Date: 02.12.2019

Value Added Course offered by the Department of ECE will be conducted for Second, Third and Final year students on "Learning Arduino Platform and its Uses" in association with Galwin Technology from 09.12.2019 to 14.12.2019. Certificates will be issued to the eligible participants at the end of the course.

| S.No | Name of the Course | Resource Person |
|------|--|---|
| 1 | Learning Arduino Platform and its Uses | Er.S.DEEPAN, Embedded Developer, Galwin Technology, 12A, Periyasamy Towers, 3rd floor, Chathiram Bus Stand, Trichy- 620 002. Tamil Nadu . Mail.Id: info@galwintech.in |

Cc:

Principal's Office

IQAC Coordinator

Class In charges- II ,III &IV Year

II ,III & IV Year ECE Students

Notice Board

HoD/ECE HOD / ECE SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURICHI, PUDUKKOTTAI - 622 303

Dr. S.THILAGAVATHLM.E., Ph.D.,



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25) Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING ACADEMIC YEAR 2019-2020/EVEN SEMESTER

Value Added Course on "LEARNING ARDUINO PLATFORM AND ITS USES" SYLLABUS"

| S.NO | TOPIC COVERED | DURATION (in hours) | DATE |
|------|---|---------------------|------------|
| 1 | Indroduction of Arduino | 2 | 9.12.2019 |
| 2 | Anatomy of an Arduino Board | 1 | 9.12.2019 |
| 3 | Basic Operation, Circuit Basics | 3 | 9.12.2019 |
| 4 | Sensors & Actuators, Memory, Embedded Sensors | 3 | 10.12.2019 |
| 5 | Sensors and Software: Understanding Processing Code Structure, variables and flow control,Interfacing to the Real World | 3 | 10.12.2019 |
| 6 | Libraries, GPIO / Pin Management | 3 | 11.12.2019 |
| 7 | Core Specific API | 3 | 11.12.2019 |
| 8 | Arduino Software Tools | 3 | 12.12.2019 |
| 9 | Arduino IDE 1.8.x | 3 | 12.12.2019 |
| 10 | Internet of Things (IoT) | 3 | 13.12.2019 |
| 11 | Arduino programming language and IDE, Program basic Arduino examples. | 3 | 13.12.2019 |
| 12 | Arduino API, Structure | 3 | 14.12.2019 |
| 13 | Arduino Communication Modules | 3 | 14.12.2019 |
| | Total Hours | | 36 |

VACCoordinator

Dr. S.THILAĞAVATHI ME., Ph.D.,
PRINCIPAL

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN Kaikkurchi - 622 303, Pudukkottai Dt. HoD/ECE

HOD / ECE

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURICHI, PUDUKKOTTAI - 622 303



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25) Kaikkurichi, Pudukkottai, Tamil Nadu - 622 303, India

DEPARTMENT OF ELECTRONICS AN COMMUNICATIONENGINEERING **ACADEMIC YEAR EVEN SEMESTER (2019-2020)**

STUDENT PARTICIPATION LIST FOR VALUE ADDED PROGRAM

Learning Arduino Platform and its Uses

| S.NO | REG.NO | NAME | YEAR & BRANCH |
|-------|--------------|------------------|------------------|
| 11018 | 912618106001 | ANUSHAA S | II & ECE |
| 2 | 912618106002 | ARIVARASI A | II & ECE |
| 3 | 912618106003 | ASMATH HAZEENA N | II & ECE |
| 4 | 912618106004 | ATCHAYA R | II & ECE |
| 5 | 912618106005 | JAYAPRIYA T | II & ECE |
| 6 | 912618106006 | JAYASRI M | II & ECE |
| 7 | 912618106007 | NAGALAKSHMI P | II & ECE |
| 8 | 912618106008 | NAVITHRA D | II & ECE |
| 9 | 912618106009 | ROHINI K | II & ECE |
| 10 | 912618106010 | SOUNTHARYA P | II & ECE |
| 11 | 912618106012 | THAIYAL NAYAGI K | II & ECE |
| 12 | 912618106701 | JANANI.R | II & ECE |
| 13 | 912617106001 | ABIRAMI S | III & ECE |
| 14 | 912617106002 | ABISHEKA S | III & ECE |
| 15 | 912617106003 | ATSHAYA R | III & ECE |
| 16 | 912617106004 | BAVADHARANI A | III & ECE |
| 17 | 912617106005 | BHUVANESHWARI B | III & ECE |
| 18 | 912617106006 | DHIVYA L | III & ECE |
| 19 | 912617106007 | GOWSALYA D | III & ECE |
| 20 | 912617106009 | INDHUMATHI S | III & ECE |
| 21 | 912617106010 | KANIMOZHI D | III & ECE |
| 22 | 912617106011 | KAVYA C | III & ECE |
| 23 | 912617106012 | KEERTHANA G | III & ECE |
| 24 | 912617106013 | MAHESHWARI G | III & ECE |

Dr. S.THILAGAVATHI M.E., Ph.D.,

SRI BHARATHI ENGINEERING

COLLEGE FOR WOMEN kkurchi - 622 303 Pudukkotiai Dt

| S.NO | REG.NO | NAME | YEAR & BRANCH |
|------|--------------|--------------------|------------------|
| 25 | 912617106014 | MANOHARI M | III & ECE |
| 26 | 912617106015 | MARAGATHALAKSHMI S | III & ECE |
| 27 | 912617106017 | SAFRIN NISHA S | III & ECE |
| 28 | 912617106018 | SUBASHINI M | III & ECE |
| 29 | 912617106019 | SUBASHINI T | III & ECE |
| 30 | 912617106020 | VINTHIYA R | III & ECE |
| 31 | 912616106001 | ABINAYA R | IV& ECE |
| 32 | 912616106002 | AGALYA A | IV& ECE |
| 33 | 912616106003 | ATCHAYA G | IV& ECE |
| 34 | 912616106004 | DEEPA N | IV& ECE |
| 35 | 912616106005 | DHARANIYA A | IV& ECE |
| 36 | 912616106006 | JEEVITHA U | IV& ECE |
| 37 | 912616106007 | MAHESWARI V | IV& ECE |
| 38 | 912616106008 | PAZHANIYAMMAL R | IV& ECE |
| 39 | 912616106009 | PRIYANKA E | IV& ECE |
| 40 | 912616106010 | ROJA A | IV& ECE |
| 41 | 912616106011 | SHANMUGAPRIYA R | IV& ECE |
| 42 | 912616106012 | SHIYAMALA E | IV& ECE |
| 43 | 912616106013 | SIVABHARATHI P | IV& ECE |
| 44 | 912616106014 | SIVARUBINI S | IV& ECE |
| 45 | 912616106016 | VINCY A | IV& ECE |
| 46 | 912616106302 | SANKAVI M | IV& ECE |

Coordinator

HoD/ECE

HOD / ECE SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURICHI,

PUDUKKOTTAI - 622 303

Dr. S.THILAGAVATHI M.B., Ph.D.,



KAIKKURICHI, PUDUKKOTTAI-622 303

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING ACADEMIC YEAR EVEN SEMESTER (2019-2020)

ATTENDANCE SHEET FOR VALUE ADDED COURSE-LEARNING ARDUINO PLATFORM AND ITS USES

| CNI | REG. NO NAME | | YEAR/ | The state of the s | | 10.12 | .2019 | 11.12 | .2019 | 12.12. | 2019 | 13.12 | .2019 | 14.12.2019 | | NO. OF SESSIONS | SIGN OF |
|------|--------------|------------------|----------|--|-----|-------|-------|-------------|-------|--------|-----------|---------|-------|------------|-----|--------------------|-------------|
| S.No | REG. NO | NAME | BRANCH | F.N | A.N | F.N | A.N | F.N | A.N | F.N | A.N | F.N | A.N | F.N | A.N | ATTENDED | STUDENT |
| 1 | 912618106001 | ANUSHAA S | II/ECE | a | a | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | South |
| 2 | 912618106002 | ARIVARASI A | II/ECE | 1 | / | 1 | , | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | Drivari. A |
| 3 | 912618106003 | ASMATH HAZEENA N | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | a | a | 1 | 1 | 1 | , | 10 | Brithmen. W |
| 4 | 912618106004 | ATCHAYA R | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | ATCHAYA.R |
| 5 | 912618106005 | JAYAPRIYA T | II/ECE | a | 1 | 1 | 1 | 1 | 1 | a | 1 | 1 | 1 | 1 | 1 | 10 | JayapRiye |
| 6 | 912618106006 | JAYASRI M | II/ECE | a | 1 | 1 | 1 | 1 | 1 | a | a | 1 | 1 | 1 | 1 | 9 | Jagasri |
| 7 | 912618106007 | NAGALAKSHMI P | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | Neulz |
| 8 | 912618106008 | NAVITHRA D | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | . 12 | nem |
| 9 | 912618106009 | ROHINI K | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | , | 12 | BQ. |
| 10 | 912618106010 | SOUNTHARYA P | II/ECE | a | a | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | Q.D. |
| 11 | 912618106012 | THAIYAL NAYAGI K | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12_ | Anglowy Li |
| 12 | 912618106701 | JANANI.R | II/ECE | 1 | , | 1 | , | 1 | 1 | 1 | 1 | a | a | 1 | , | 10 | fananik |
| 13 | 912617106001 | ABIRAMI S | III /ECE | 1 | 1 | 1 | A | 744 | -AGAN | VATHI | M/E | h D | 1 | 1 | 1 | 12 | S. Sboam |
| 10 | | | | (| | 2 | 1 | . 1 1 5 5 1 | | TOIDAL | 171.1., 6 | 11.15., | | | | | |

PRINCIPAL

SRI BHARATHI ENGINEERING

| | | | | | | | | | | | | | ~) | | | | |
|----|--------------|--|----------|---|---|---|---|----|-------|--------|-------|--------|-------|------|---|----|-------------|
| 14 | 912617106002 | ABISHEKA S | III /ECE | 1 | 1 | 1 | 1 | 1 | , | 1 | 1 | 1 | 1 | 1 | 1 | 12 | |
| 15 | 912617106003 | ATSHAYA R | III /ECE | a | a | , | 1 | 1 | 1 | 1 | 1 | , | , | 1 | 1 | 10 | R. Afchaya |
| 6 | 912617106004 | BAVADHARANI A | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | D. Baradle |
| 7 | 912617106005 | BHUVANESHWARI B | III /ECE | 1 | 1 | a | a | , | , | 1 | 1 | 1 | 1 | 1 | , | lo | B. Bhuran I |
| 8 | 912617106006 | DHIVYA L | III /ECE | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | , | 1 | 1 | 12 | L. Pinja |
| 9 | 912617106007 | GOWSALYA D | III /ECE | 1 | 1 | a | a | a | 1 | ^ | 1 | 1 | 1 | 1 | 1 | 9 | D. Gordon |
| 0 | 912617106009 | INDHUMATHI S | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | S. Indunate |
| 1 | 912617106010 | KANIMOZHI D | III /ECE | 1 | 1 | , | 7 | 1 | 1 | 1 | 1 | 1 | , | 1 | 1 | 12 | D. Kanima |
| 2 | 912617106011 | KAVYA C | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | C. Karya |
| 3 | 912617106012 | KEERTHANA G | III /ECE | a | a | 1 | 1 | 1 | 1 | ^ | 1 | 1 | 1 | 1 | , | lo | G. Koosthin |
| 4 | 912617106013 | MAHESHWARI G | III /ECE | 1 | 1 | , | 1 | a | a | 1 | 1 | 1 | 1 | , | , | lo | G. Malauli |
| 5 | 912617106014 | MANOHARI M | III /ECE | 1 | 1 | 1 | 1 | ., | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | M. Mui |
| 6 | 912617106015 | MARAGATHALAKSHMI S | III /ECE | a | a | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | S. Maggatta |
| 7 | 912617106017 | SAFRIN NISHA S | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 8. Saforni |
| 8 | 912617106018 | SUBASHINI M | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | a | a | 1 | 1 | 1 | 1 | lo | M-Scolashi |
| 9 | 912617106019 | SUBASHINI T | III /ECE | , | , | 1 | 1 | , | , | 1 | 1 | 1 | 1 | 1 | 1 | 12 | T. Subri |
| 0 | 912617106020 | VINTHIYA R | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | a | a | 1 | 1 | , | , | 10 | R. vinthiz |
| 1 | 912616106001 | ABINAYA R | IV/ECE | 1 | 1 | a | a | 1 | , | 1 | 1 | 1 | 1 | , | , | 10 | R. Abnor |
| 2 | 912616106002 | AGALYA A | IV/ECE | 1 | 1 | 1 | 1 | 1 | , | 1 | 1 | 1 | 1 | 1 | 1 | 12 | D. Again |
| 3 | 912616106003 | ATCHAYA G | IV/ECE | a | a | 1 | 1 | 1 | Dr.S. | THILA | GAVA | ATH! M | E.,Ph | D.,, | 1 | 10 | G. Afologe |
| | | I and the second | | | | | 1 | ~ | No. | RIBHAR | ATHIE | NGINE | ERING | | | | 7 |

COLLEGE FOR WOMEN Kaikkurchi - 622 303, Pudukkottai Dt.

| | | | | | | | | | | | | | | | | | 4 |
|----|--------------|-----------------|--------|---|---|---|---|---|---|-----|---|-----|---|----|---|----|-------------|
| 34 | 912616106004 | DEEPA N | IV/ECE | 1 | 1 | 1 | 1 | 1 | 1 | , , | | , , | 1 | 1 | 1 | 12 | N. Deopa |
| 35 | 912616106005 | DHARANIYA A | IV/ECE | a | a | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | D. Dlang |
| 36 | 912616106006 | JEEVITHA U | IV/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | U. Jeovill |
| 37 | 912616106007 | MAHESWARI V | IV/ECE | 1 | 1 | 1 | 1 | , | 1 | 1 | 1 | a | a | 1 | 1 | 10 | Ma Diani. V |
| 38 | 912616106008 | PAZHANIYAMMAL R | IV/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | a | a | 1 | 1 | 10 | Parluny |
| 39 | 912616106009 | PRIYANKA E | IV/ECE | 1 | 1 | 1 | 1 |) | 1 | 1 | d | 1 | 1 | 1 | 1 | 12 | Bryanka A |
| 40 | 912616106010 | ROJA A | IV/ECE | 1 | 1 | 1 | 1 | 7 | / | a | a | 1 | 1 | 1. | 1 | 10 | Roja |
| 41 | 912616106011 | SHANMUGAPRIYA R | IV/ECE | a | a | 1 | 1 | 1 | 1 | . / | 1 | 1 | 1 | 1 | 1 | 10 | Sharfay |
| 42 | 912616106012 | SHIYAMALA E | IV/ECE | 1 |) | 1 | 1 | 1 | 1 | / | 1 | 1 | 1 | 1 | 1 | 12 | E. Sout |
| 43 | 912616106013 | SIVABHARATHI P | IV/ECE | 1 | 1 | a | a | 1 | , | 1 | 1 | 1 | 1 | 1 | 1 | 10 | P. Cally |
| 44 | 912616106014 | SIVARUBINI S | IV/ECE | 1 | 1 | 1 | 1 | 7 | 1 | 1 | 1 | - | 1 | 1 | 1 | 12 | Swar |
| 45 | 912616106016 | VINCY A | IV/ECE | 1 | 1 | a | a | 1 | 1 | / | 1 | 1 | 1 | 1 | 1 | 10 | Mart. 8 |
| 46 | 912616106302 | SANKAVI M | IV/ECE | a | a | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | M. Sankan |
| | | | | | | | | | | | | | | | | | |

VAC Coordinator

Dr. S.THILAGAVATHEM.E., Ph.D., PRINCIPAL

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN Kaikkurchi - 622 303, Pudukkottai Dt.

HoD/ ECE

HOD / ECE SRI BHARATHI ENGINEERING

COLLEGE FOR WOMEN KAIKKURICHI,

PUDUKKOTTAI - 622 303

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| | | | Report on ' | Value | Added C | ourse | | | | | | | |
|--|-----------|---------------------------------------|------------------|-------|----------------|------------------|----------|--|--|--|--|--|--|
| Title: | Learni | earning Arduino Platform and its Uses | | | | | | | | | | | |
| Resource Person: Er.S.DEEPAN, Embedded Developer, Galwin Technology, Trichy-620 002. | | | | | | | | | | | | | |
| Date of co | nduct fro | m: | 9.12.2019 | To: | 14.12.2019 | Duration: | 36 Hours | | | | | | |
| Organized | Departm | ent: | Electronics and | Commu | nication Engin | reering | 1 | | | | | | |
| Participant | | 2/3/ | | VEN | | Students Registe | ered: 46 | | | | | | |
| Venue: | Seminar | Hall, | Ground Floor, S. | BECW | | | | | | | | | |

Outcome of Value Added Course (VAC) : At the end of Course , Students can able to

- Learn the basics of electronics, including reading schematics
- Recall the basics of sensors, its functioning.
- Execute basic and advanced assembly language programs.
- Learn the ways to interface I/O devices with processor for task sharing.
- Recall the basics of co-processor and its ways to handle float values by its instruction set.
- Recognize the functionality of micro controller, latest version processors and its applications.
- Design a component with realistic constraints, to solve real world engineering problems and analyse the results.
- After the completion of the course, the students will be specialized in Embedded System design using Arduino.

No. of students successfully completed the VAC course is 46 Students based on the following Assessment process.

Assessment Process

- Students securing more than 60% on total score and secured more than 75% in attendance is eligible to receive the certificate for the VAC course conducted
- Total Score = (0.5 *Attendance in VAC out of 100 percentage + 0.5 *Test mark in VAC out of 100 marks)

rdinator

Principal

COLLEGE FOR WOMEN KAIKKURICHI.

PUDUKKOTTAI - 622 303.

Dr. S.THILAGAVATHI M.E., Ph.I PRINCIPAL

18/12



(Approved by AICTE | Affiliated to Anna University)

KAIKKURICHI, PUDUKKOTTAI-622303



Certificate of completion

VALUE ADDED PROGRAM

This is to Certify that Mr/Ms. **ATCHAYA.R** of **II ECE** has successfully completed Value Added Course on "Learning Arduino Platform and its Uses" organized by the department of Electronics and Communication Engineering in association with Galwin Technology from 09.12.2019 to 14.12.2019 during the academic year 2019-2020.

Managing Director Galwin Technology HoD/ECE SBECW

PRINCIPAL SBECW

Dr S.THILAGAVATHIM.E., Ph.D.,



(Approved by AICTE | Affiliated to Anna University)

KAIKKURICHI, PUDUKKOTTAI-622303



Certificate of completion

VALUE ADDED PROGRAM

This is to Certify that Mr/Ms. **VINTHIYA. R** of **III ECE** has successfully completed Value Added Course on "Learning Arduino Platform and its Uses" organized by the department of Electronics and Communication Engineering in association with Galwin Technology from 09.12.2019 to 14.12.2019 during the academic year 2019-2020.

Managing Director Galwin Technology HoD/ECE SBECW PRINCIPAL SBECW

Dr. S.THILAGAVATHI M.E. Ph.D.,
PRINCIPAL



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KAIKKURICHI, PUDUKKOTTAI-622303



Certificate of completion

VALUE ADDED PROGRAM

This is to Certify that Mr/Ms. **SANKAVI** .M of **IV ECE** has successfully completed Value Added Course on "Learning Arduino Platform and its Uses" organized by the department of Electronics and Communication Engineering in association with Galwin Technology from 09.12.2019 to 14.12.2019 during the academic year 2019-2020.

Managing Director
Galwin Technology

HoD/ECE SBECW PRINCIPAL SBECW

Dr. S.THILAGAVATHI M.E., Ph.D.,

SRI BHARATHI ENGINEERING

COLLEGE FOR WOMEN



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25) Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

| Name of the Student: | Year/Sem: |
|---|--|
| AU Register Number: | (mig/bas/lgolanA(a |
| Value Added Course on "Learning" | g Arduino Platform and its Uses" |
| | S(20X1 = 20 Marks) |
| 1. Arduino shields are also called as | |
| a) Extra peripheralsb) Add-on modulest | c)Connectivity modules d) Another Arduinos |
| 2. Which is the software or a programming langa) Assembly Language | uage used for controlling of Arduino? c)C. JAVA |
| b) C Languages | d) Any Language |
| 3. What are the uses of Arduino? a)Inexpensive b)Cross-platform | c)Open source and extensible software d)All of the above |
| 4. What are the different file extensions for? a)ino b)pde c)C. h | d)All of the above |
| 5. What are the types of Arduino? | |
| a)Arduino UNO b)Arduino Mega | c)Arduino Duemilanove d)All of the above |
| 6. Arduino IDE consists of 2 functions. What are | thay? |
| a)Build() and loop() b)Setup() and build() | c)Setup() and loop() d)Loop() and build() and setup() |
| 7. What are Arduino UNO Salient features? a)PWM (Pulse Width Modulation) outputs b)Input Pins (Analog) | c)DC Current (Max) d)All of the above |
| 8. What is PWM? a)A built-in library to control DC motor b)A type of oscilloscope used with microcontrol | ollers as Arduino |

9. What are the Steps to program an Arduino?

c) Is a technique for getting analog results with digital means d) Is a technique for getting digital results with analog means

a)Declaration of Variables

b)Initialization

c)Control code d)All the above Dr S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25) Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

| 10. What are the basic a)AnalogRead(pi b)AnalogWrite(p | n) | c)serial.begin(baud rate) d)All of the above | | | | | | |
|--|-----------------------------------|---|--|--|--|--|--|--|
| 11. Delay(5000); stand a)Wait 5 minutes | ds for b) Wait 5 seconds | c)Wait 50 seconds | | | | | | |
| 12. Digitalwrite(13, LC a) on | DW); turns the light b)offcorrect | c)dim | | | | | | |
| 13. A forward slash is a)code | used for b)output | c)comments | | | | | | |
| 14. An LED is an: a)output | b) input | | | | | | | |
| 15. An push button is a)Output | b) input | | | | | | | |
| 16. An knob is a)Output | b) input | That are the different file extensions for? s)ino b)pde c)C, h | | | | | | |
| 17. An servo is a)Output | b) input | | | | | | | |
| 18. A sketch is a)an Arduino file | b)an Arduino picture | c) an Arduino board | | | | | | |
| 19. How long is the LE digital Write(13, H) | | | | | | | | |

20. Which pin is the jumper wire connected to?

b)100 seconds

digitalWrite(13, HIGH); delay(1000); digitalWrite(13, LOW); delay(1000);

digitalWrite(13, LOW);

delay(1000);

a) 1000 seconds

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a)13

b)12

c)100

c)1 second

d)digital pin Kaikkurchi - 622 303, Pudukkottai Dt.

d)100 milliseconds



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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2019-2020/EVEN SEMESTER

Value Added Course on "Learning Arduino Platform and its Uses"

MCQ ANSWER KEY

| 1 | В | 6 | С | 11 | В | 16 | В |
|---|---|----|---|----|---|----|---|
| 2 | D | 7 | D | 12 | В | 17 | A |
| 3 | D | 8 | С | 13 | C | 18 | A |
| 4 | D | 9 | D | 14 | A | 19 | С |
| 5 | D | 10 | D | 15 | В | 20 | A |

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| Nama of the Student and | |
|--|---|
| rame of the student: Nagalakish | Mu.p Year/Sem: 1/1V |
| Name of the Student: Nagolaksh AU Register Number: 91 26 18 10 600 | 7 |
| Value Added Course on "Learning | ng Arduino Platform and its Uses" |
| | S(20X1 = 20 Marks) |
| 1. Arduino shields are also called as | |
| a) Extra peripherals (b) Add-on modulest | c)Connectivity modules d) Another Arduinos |
| 2. Which is the software or a programming lang a) Assembly Language | guage used for controlling of Arduino? |
| b) C Languages | d) Any Language |
| 3. What are the uses of Arduino? a)Inexpensive b)Cross-platform | c)Open source and extensible software (d)All of the above |
| What are the different file extensions for? a)ino b)pde c)C. h | (d)All of the above |
| 5. What are the types of Arduino? a)Arduino UNO b)Arduino Mega | c)Arduino Duemilanove d)All of the above |
| 6 Arduino IDE consists of 2 functions. What are | e they? |
| a)Build() and loop() b)Setup() and build() | ©Setup() and loop() d)Loop() and build() and setup() |
| 7. What are Arduino UNO Salient features? a)PWM (Pulse Width Modulation) outputs b)Input Pins (Analog) | c)DC Current (Max) d)All of the above |
| 8. What is PWM? a)A built-in library to control DC motor b)A type of oscilloscope used with microcontrols a technique for getting analog results with | ollers as Arduino digital means |

What are the Steps to program an Arduino? a)Declaration of Variables

d) Is a technique for getting digital results with analog means

b)Initialization

d)All the above

c)Control code Dr. S.THILAGAVATHI M.E., Ph.D. PRINCIPAL SRI BHARATHI ENGINEERING

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| (10. What are the basi a)AnalogRead(p b)AnalogWrite(p | | c)serial.begi | n(baud rate) above |
|---|----------------------------------|---------------|--|
| 11. Delay(5000); stan a) Wait 5 minutes | ds for b) Wait 5 seconds | c)Wait 50 se | |
| 12. Digitalwrite(13, Loa) on | OW); turns the light Boffcorrect | c)dim | Leanduino shinds are also called are also called are positionals. |
| 13. A forward slash is a)code | used for b)output | ©comments | |
| 14. An LED is an: a)output | (b) input | | |
| 15. An push button is a)Output | (B) input | | |
| 16. An knob is a)Output | (b) input | | extendit ingraftis aritma are tillo extendit (illo extendit aritmo extendit ar |
| 17. An servo is a Output | b) input | | Sewhat and the Expessor Andurano an Andurano LONO |
| 18. A sketch is a)an Arduino file | b)an Arduino picture | c) an Arduin | o board |
| 19. How long is the L digitalWrite(13, H delay(1000); digitalWrite(13, L delay(1000); | IIGH); | | Capping Oblination (a) Schup (nand bond) (b) Schup (nand bond) (b) Schup (nand bond) (c) Schup (nand see Acdume Uric) (d) Schup (nand see Acdume Video (nan |
| a) 1000 seconds | (B) 100 seconds | c)1 second | d)100 milliseconds |
| 20. Which pin is the j | umper wire connected to | ? | |
| digitalWrite(13 delay(1000); digitalWrite(13 delay(1000); | anasa minig | | Dr. S.THILAGAVATHI M.E., Ph.D. PRINCIPAL SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN |
| (a) 13 | b)12 | c)100 | d)digital pin Kaikkurchi - 622 303, Pudukkottai Dt. |



b)Initialization

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| Name of the Student : MANO HARI | Year/Sem: M/ECE/ |
|---|--|
| AU Register Number: 91261710 | 6014 |
| Value Added Course on "Learning | 1 00 |
| MCQ QUESTIONS | (20X1 = 20 Marks) |
| 1. Arduino shields are also called as a) Extra peripherals b) Add-on modulest | c)Connectivity modules d) Another Arduinos |
| 2. Which is the software or a programming langual a) Assembly Language b) C Languages | age used for controlling of Arduino? c)C. JAVA d) Any Language |
| 3. What are the uses of Arduino? a)Inexpensive b)Cross-platform | c)Open source and extensible software d)All of the above |
| A. What are the different file extensions for? a)ino b)pde c)C. h | d)All of the above |
| 5. What are the types of Arduino? a)Arduino UNO b)Arduino Mega | c)Arduino Duemilanove d)All of the above |
| 6. Arduino IDE consists of 2 functions. What are a)Build() and loop() b)Setup() and build() | they? CSetup() and loop() d)Loop() and build() and setup() |
| What are Arduino UNO Salient features? (a) PWM (Pulse Width Modulation) outputs b) Input Pins (Analog) | c)DC Current (Max) d)All of the above |
| 8. What is PWM? a) A built-in library to control DC motor b) A type of oscilloscope used with microcontrol of the control of | digital means |
| 9. What are the Steps to program an Arduino? (a) Declaration of Variables | c)Control code |

d)All the above Dr. S.THILAGAVATHIM.E.,Ph.D., PRINCIPAL SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN Kaikkurchi - 622 303, Pudukkottai Dt.



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| (a) AnalogRead(pi b) AnalogWrite(p | n) | c)serial.begi d)All of the | |
|---|----------------------------------|-------------------------------|--|
| Delay(5000); stand a)Wait 5 minutes | ds for (b) Wait 5 seconds | c)Wait 50 se | econds |
| 12. Digitalwrite(13, LC a) on | DW); turns the light boffcorrect | c)dim | |
| 3. A forward slash is a)code | used for boutput | c)comments | |
| 14. An LED is an: | b) input | | |
| 15. An push button is a)Output | (b) input | | 3. What are the uses of Arduino? a) Inexpensive |
| 16. An knob is a)Output | (b) input | | |
| 17. An servo is (a) Output | b) input | | |
| 18. A sketch is (a)an Arduino file | b)an Arduino picture | c) an Arduin | o board |
| 19. How long is the LE digitalWrite(13, H) delay(1000); digitalWrite(13, LO | IGH); | | |
| delay(1000); (a) 1000 seconds | b)100 seconds | c)1 second | d)100 milliseconds |
| 20. Which pin is the ju | mper wire connected to | o? | |
| digitalWrite(13, delay(1000); digitalWrite(13, delay(1000); | digital means | | Dr. S.THILAGAVATHI M.E.,Ph.D. PRINCIPAL SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN |
| (a)13 | b)12 | (50) 100 | Kaikkurchi - 622 303, Pudukkottai Dt. |



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| AU Register Number: 91261610 | Year/Sem: IV /VIII |
|---|--|
| | CARDY MIGHEN WE ROLL AND THE CONTROL OF THE CONTROL |
| value Added Course on Learn | ing Arduino Platform and its Uses" |
| MCQ QUESTION | NS (20X1 = 20 Marks) |
| Arduino shields are also called as | 32. Digitalwrite(13, EOW); turns the light |
| a) Extra peripherals Add-on modulest | c)Connectivity modules d) Another Arduinos |
| 2. Which is the software or a programming lan | guage used for controlling of Arduino? |
| a) Assembly Language b) C Languages | c)C. JAVA |
| o) C Languages | d) Any Language |
| 3. What are the uses of Arduino? | |
| a)Inexpensive b)Cross-platform | c)Open source and extensible software d)All of the above |
| 4. What are the different file extensions for? | |
| 4. What are the different file extensions for? a)ino b)pde c)C. h | d)All of the above |
| . What are the types of Arduino? | |
| 5. What are the types of Arduino? a)Arduino UNO | c)Arduino Duemilanove |
| b)Arduino Mega | d)All of the above |
| 6. Arduino IDE consists of 2 functions. What a | re they? |
| a)Build() and loop() | Ce)Setup() and loop() |
| b)Setup() and build() | d)Loop() and build() and setup() |
| 7. What are Arduino UNO Salient features? | |
| a)PWM (Pulse Width Modulation) outputs | c)DC Current (Max) |
| b)Input Pins (Analog) | d)All of the above |
| & What is PWM? | apinose to territoria apinose utori (ii) |
| a)A built-in library to control DC motor | |

Q. What are the Steps to program an Arduino?

e)Control code

d)All the above

a)Declaration of Variables

b)Initialization

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| 10. What are the basic a)AnalogRead(pin b)AnalogWrite(pin | 1) | c)serial.begin(baud rate |
|---|----------------------------------|--------------------------|
| 1. Delay(5000); standa) Wait 5 minutes | s for (b) Wait 5 seconds | c)Wait 50 seconds |
| 2. Digitalwrite(13, LO | W); turns the light b)offcorrect | c)dim |
| 13. A forward slash is u a)code | sed for b)output | Comments |
| 14. An LED is an: | b) input | 50.64 |
| 15. An push button is a)Output | b) input | |

6. An knob is a)Output

b) input

17. An servo is a)Output

b) input

18. A sketch is

a)an Arduino file

b)an Arduino picture

c) an Arduino board

19. How long is the LED on? digitalWrite(13, HIGH); delay(1000); digitalWrite(13, LOW); delay(1000);

a) 1000 seconds

b)100 seconds

c)1 second

d)100 milliseconds

20. Which pin is the jumper wire connected to?

digitalWrite(13, HIGH); delay(1000); digitalWrite(13, LOW); delay(1000);

b)12

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d)digital pin



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DEPARTMENT OF ELECTRONICS AND COMMUNICATIONENGINEERING ACADEMIC YEAR EVEN SEMESTER (2019-2020)

MARK SHEET FOR VALUE ADDED COURSE- LEARNING ARDUINO PLATFORM AND ITS USES

| REGISTER | | KEERTHANA G | YEAR | Attendance (A) | | VAC -MCQ TEST (B) | | OVERALL MARK(100) |
|----------|--------------|------------------|-------------|-------------------------------|----------------|----------------------------|-------------|-----------------------|
| S.NO | NUMBER | NAME | & BRANCH | No.of Sessions Attented | Marks (100) | No.of Correct Answer | Marks (100) | (50% of A + 50% of B) |
| 1 | 912618106001 | ANUSHAA S | II /ECE | 10 | 83 | 16 | 80 | 82 |
| 2 | 912618106002 | ARIVARASI A | II /ECE | 12 | 100 | 18 | 90 | 95 |
| 3 | 912618106003 | ASMATH HAZEENA N | II /ECE | 10 | 83 | 17 | 85 | 84 |
| 4 | 912618106004 | ATCHAYA R | II /ECE | 12 | 100 | 14 | 60 | 80 |
| 5 | 912618106005 | JAYAPRIYA T | II /ECE | 10 | 83 | 13 | 65 | 74 |
| 6 | 912618106006 | JAYASRI M | II /ECE | 9 | 75 | 15 | 75 | 75 |
| 7 | 912618106007 | NAGALAKSHMI P | II /ECE | 12 | 100 | 16 | 80 | 90 |
| 8 | 912618106008 | NAVITHRA D | II /ECE | 12 | 100 | 15 | 75 | 88 |
| 9 | 912618106009 | ROHINI K | II /ECE | 12 | 100 | 15 | 75 | 88 |
| 10 | 912618106010 | SOUNTHARYA P | II /ECE | 10 | 83 | 19 | 95 | 89 |
| 11 | 912618106012 | THAIYAL NAYAGI K | II /ECE | 12 | 100 | 17 | 85 | <u> </u> |

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| and the second second second | | | | | | | | |
|------------------------------|--------------|--------------------|----------|----|-----|----|----|----|
| 12 | 912618106701 | JANANI.R | II /ECE | 10 | 83 | 13 | 65 | 74 |
| 13 | 912617106001 | ABIRAMI S | III /ECE | 12 | 100 | 14 | 70 | 85 |
| 14 | 912617106002 | ABISHEKA S | III /ECE | 12 | 100 | 13 | 65 | 83 |
| 15 | 912617106003 | ATSHAYA R | III /ECE | 10 | 83 | 16 | 80 | 82 |
| 16 | 912617106004 | BAVADHARANI A | III /ECE | 12 | 100 | 13 | 65 | 83 |
| 17 | 912617106005 | BHUVANESHWARI B | III /ECE | 10 | 83 | 14 | 70 | 77 |
| 18 | 912617106006 | DHIVYA L | III /ECE | 12 | 100 | 19 | 95 | 98 |
| 19 | 912617106007 | GOWSALYA D | III /ECE | 9 | 75 | 18 | 90 | 83 |
| 20 | 912617106009 | INDHUMATHI S | III /ECE | 12 | 100 | 16 | 80 | 90 |
| 21 | 912617106010 | KANIMOZHI D | III /ECE | 12 | 100 | 14 | 60 | 80 |
| 22 | 912617106011 | KAVYA C | III /ECE | 12 | 100 | 18 | 90 | 95 |
| 23 | 912617106012 | KEERTHANA G | III /ECE | 10 | 83 | 14 | 70 | 77 |
| 24 | 912617106013 | MAHESHWARI G | III /ECE | 10 | 83 | 14 | 70 | 77 |
| 25 | 912617106014 | MANOHARI M | III /ECE | 12 | 100 | 15 | 75 | 88 |
| 26 | 912617106015 | MARAGATHALAKSHMI S | III /ECE | 10 | 83 | 18 | 90 | 87 |
| 27 | 912617106017 | SAFRIN NISHA S | III /ECE | 12 | 100 | 16 | 80 | 90 |
| 28 | 912617106018 | SUBASHINI M | III /ECE | 10 | 83 | 19 | 95 | 89 |
| 29 | 912617106019 | SUBASHINI T | III /ECE | 12 | 100 | 14 | 70 | 85 |
| 30 | 912617106020 | VINTHIYA R | III /ECE | 10 | 83 | 14 | 70 | 77 |

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| 31 | 912616106001 | ABINAYA R | IV/ECE | 10 | 83 | 14 | 70 | 77 |
|----|--------------|-----------------|--------|-----|-----|------|------|----|
| 32 | 912616106002 | AGALYA A | IV/ECE | 12 | 100 | 19 | 95 | 98 |
| 33 | 912616106003 | ATCHAYA G | IV/ECE | 10 | 83 | 13 | 65 | 74 |
| 34 | 912616106004 | DEEPA N | IV/ECE | 12 | 100 | 14 | 70 | 85 |
| 35 | 912616106005 | DHARANIYA A | IV/ECE | 10 | 83 | 14 | 70 | 77 |
| 36 | 912616106006 | JEEVITHA U | IV/ECE | 12 | 100 | 17 | 75 | 88 |
| 37 | 912616106007 | MAHESWARI V | IV/ECE | 10 | 83 | 18 | 90 | 87 |
| 38 | 912616106008 | PAZHANIYAMMAL R | IV/ECE | 10 | 83 | 16 | 80 | 82 |
| 39 | 912616106009 | PRIYANKA E | IV/ECE | 12 | 100 | 15 | . 75 | 88 |
| 40 | 912616106010 | ROJA A | IV/ECE | 10 | 83 | 14 | 70 | 77 |
| 41 | 912616106011 | SHANMUGAPRIYA R | IV/ECE | 10 | 83 | · 16 | 80 | 82 |
| 42 | 912616106012 | SHIYAMALA E | IV/ECE | 12 | 100 | 15 | 75 | 88 |
| 43 | 912616106013 | SIVABHARATHI P | IV/ECE | 10 | 83 | 17 | 85 | 84 |
| 44 | 912616106014 | SIVARUBINI S | IV/ECE | 12 | 100 | 15 | 75 | 88 |
| 45 | 912616106016 | VINCY A | IV/ECE | 10' | 83 | 14 | . 70 | 77 |
| 46 | 912616106302 | SANKAVI M | IV/ECE | 10 | 83 | 17 | 85 | 84 |

VAC Coordinator

Dr. S.THILAGAVATHI M.E., Ph.D.,
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