



# **IDHAYA ENGINEERING COLLEGE FOR WOMEN**

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

2(f) Status of UGC, An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

**ACADEMIC YEAR**

**2020 -21**



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S.No	Name of the Add-on Course
1.	Data Analysis with JAMOVI
2.	FPGA Architecture and Prototyping
3.	PCB & Circuit Designing
4.	Statistics with 'R' Programming
5.	The Arduino Platform and C Programming
6.	Arduino Programming and Interfacing
7.	IOT using Arduino
8.	NPTEL Course on Digital Image Processing
9.	NPTEL Course on Cloud Computing

*Ruveni*  
**Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**  
**PRINCIPAL**  
**IDHAYA ENGG. COLLEGE FOR WOMEN**  
**CHINNASALEM-606 201, KALLAKURICHI DT**



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---

## **DATA ANALYSIS WITH JAMOVI**



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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref: IECW/CSE/RL/2021

Date: 18.02.2021

## Requisition Letter

To:

The principal,  
Idhaya Engineering College for Women,  
Chinnasalem – 606201.

Through:

Head of the Department,  
Department of Computer Science Engineering.

Sub: Request for organising a 30 hours Add-on Course.

Dear Sir,

I, Sr.C.Jansi Sophia Mary, Assistant Professor in the Department of Computer Science Engineering, would like to conduct a 30 hours Add-on Course with the objective of learning advanced techniques on "Data Analysis with JAMOVI" from 22.02.2021 to 26.02.2021 for third year CSE & IT students. In this regard, I request you to give permission for the course.

Thanking you sir.

Yours Sincerely

(Sr.C..Jansi Sophia Mary)

*Ramani*  
Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL  
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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref: IECW/CSE/CC/2021

Date: 18.02.2021

## Add-on Course-Syllabus

Name of the Course: Data -Analysis with JAMOVI

Academic Year: 2020-21

### Course Objectives:

JAMOVI is application that makes data analysis easy and intuitive JAMOV menus and commands are designed to simplify the transition from programs like SPSS but, under the hood, JAMOV is based on the powerful statistical programming language R. The students will get hands-on

Experience in working with JAMOVI application.

- Topic-I Basics of Statistical Data Analysis-** Basics of Statistics, Collection and tabulation of statistical data, Measurements of Scale, Types of Data, Types of statistical techniques. **Installation of JAMOVI software-** Installing JAMOVI, Navigating JAMOVI 6
- Topic-II Introduction to JAMOVI software-** Wrangling data, Entering data, Importing data, Variable types & labels, Computing means, Computing z-scores, Transforming scores to categories, Filtering cases. **Descriptive data analysis-** Measures of central tendency, Measures of Dispersion, Exporting tables and plots, Frequency distribution 6
- Topic-III Fundamentals of Hypothesis testing-** Introduction to Hypothesis, Types of Hypothesis, Data Sampling, Confidence and Significance Levels, Assumptions of Parametric test and Non parametric tests. **T-Test-** T test: Overview, Independent, Paired, One-Sample 6
- Topic-IV Analysis of Variance (ANOVA):** One Way and Two Way ANOVA: chapter overview, One Way ANOVA, Two Way ANOVA, ANCOVA, MANCOVA . **Non parametric tests-** Mann Whitney U test, Chi Square test, Friedman test, Kruskal Wallis H test 6

*Heaven*  
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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

**Topic-V Correlation & Regression - Introduction to Regression Analysis, Types of 6**  
Regression Analysis Models, Linear Regression, Non-Linear Regression  
Regression Analysis with Multiple Variables. **Factor Analysis-** Reliability  
Analysis, Reliability Analysis, Exploratory factor, Confirmatory Factor  
Analysis

**Total Hours 30**

## Outcomes:

After completion of the course, the students will be able to understand the working of Data Analysis with JAMOVI .The students will able to understand JAMOVI practically.

Course Co-ordinator.

HOD

**Dr.R.GURUMANI**, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,

**PRINCIPAL**

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Ref: IECW/CSE/CIR/2021

Date: 18.02.2021

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### CIRCULAR

The Department of Computer Science and Engineering is offering Data Analysis with JAMOVI as 30 hours Add -on Course for third year CSE& IT students from 22.02.2021 to 26.02.2021 for the academic year 2020-2021. Sr.C.Jansi Sophia Mary, Assistant Professor /CSE will coordinate this course. Interested students can enrol their name for the course with Sr.C. Jansi Sophia Mary.

  
HOD

#### Copy To:

1. Secretary for her kind information.
2. Principal
3. Vice Principal.
4. HOD( IT )
5. To circulate among the departments staff members.
6. File.

#### CC To:

To read in third year CSE& IT classes.

  
**R. GURUMAN**, M.B.A., P.H.D., B.A., B.L., B.COM., B.E.,  
**PRINCIPAL**  
**IDHAYA ENGG. COLLEGE FOR WOMEN**  
**CHINNASALEM-606 201, KALLAKURICHI DT.**



**Idhaya Engineering College for Women  
Chinnasaalem - 606201**

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

**ADD-ON COURSE  
ON**

**"DATA -ANALYSIS WITH JAMOVI"**

**22 ND FEBRUARY - 26TH FEBRUARY-2021**

**SR.C..JANSI SOPHIA MARY**

**ASSISTANT PROFESSOR, CSE/IECW**

**Venue: LH 11- IECW**

**ABOUT THE COURSE:**

**PARTICIPANTS:  
THIRD YEAR CSE& IT STUDENTS**

**IMPORTANT DATES:  
Last Date of Registration:  
20.02.2021**

**JAMOVI is application that makes  
data analysis easy and intuitive  
JAMOVI menus and commands are  
designed to simplify the transition  
from programs like SPSS but, under  
the hood, JAMOVI is based on the  
powerful statistical programming  
languageR**

**CALL US  
04151-258325, 258326**

*Heaven*  
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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/CSE/SR/2021

Date: 20.02.2021

## Add-on Course

Name of the Course: **Data -Analysis with JAMOVI**

Academic Year: 2020-21

Course Duration: 22.02.2021 to 26.02.2021 (30 hours)

Year/Dept.: **III/CSE**

## Registered Students

S. No	Roll No.	Name
1.	621118104001	AGNES TREESA
2.	621118104002	ANGEL J
3.	621118104003	APOORVASRI M
4.	621118104004	BABYKALAIYARASI
5.	621118104005	BAVINA D
6.	621118104006	BHARATHI M
7.	621118104007	DEVIKA V
8.	621118104008	GAYATHRI S
9.	621118104009	HEMARITHI B
10.	621118104010	INBANILA A
11.	621118104012	KALAISELVI P
12.	621118104013	KALAIVANI J
13.	621118104038	KAVIYADHARSHINI
14.	621118104015	LYDIAL N
15.	621118104016	MADHUMITHA K
16.	621118104017	MARYSARAL A
17.	621118104018	MONICA CECILI V
18.	621118104019	NANDHINI P
19.	621118104021	NISHA V
20.	621118104022	PAVITHRA M
21.	621118104023	PREETHA A
22.	621118104024	PRIYA G
23.	621118104025	PRIYANKA K
24.	621118104026	RAGAVI K
25.	621118104027	RAMYA R
26.	621118104028	RAMYA T
27.	621118104029	RAVEENA R
28.	621118104030	RENUGADEVI M
29.	621118104031	SANDHIGA.M
30.	621118104032	SANGEETHA T
31.	621118104033	SHEELA V
32.	621118104034	SUBASRI E
33.	621118104035	SUBHA G
34.	621118104036	SWATHI V
35.	621118104037	Dr. YUVASREE B

Course Co-ordinator

**PRINCIPAL**  
IDHAYA ENGG. COLLEGE FOR WOMEN HOD  
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Ref: IECW/IT/SR/2021

Date: 20.02.2021

## Add-on Course

Name of the Course: **Data -Analysis with JAMOVI**

Academic Year: 2020-21


Course Duration: 22.02.2021 to 26.02.2021 (30 hours)

Year/Dept.: III/IT

## Registered Students

S. No	Roll No.	Name
1.	6211182050	AFREEN M
2.	6211182050	ANNAKODI B
3.	6211182050	BHUVANESHWARI M
4.	6211182050	DHULSIN A
5.	6211182050	FARSHA T
6.	6211182050	HEENA J
7.	6211182050	INFANT DAICY T
8.	6211182050	JESTIN JEEVA Y
9.	6211182050	MADHUMITHA V
10.	6211182050	MONIKA S
11.	6211182050	ROSY J
12.	6211182050	SNEHA V
13.	6211182050	SWETHA M J
14.	6211182050	VAIJAYANTHI V
15.	6211182050	YAMUNASRI S
16.	6211182059	DHARANYA G R

  
Course Co-ordinator

  
HOD

  
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Ref: IECW/CSE/SAL/2021

Date: 22.02.2021

## Add-on Course

Name of the Course: **Data -Analysis with JAMOV**

Academic Year: 2020-21

Course Duration: 22.02.2021-26.02.2021 (30 hours)

Year/Dept.: III/CSE

## Students Attendance List

S. No	Roll No.	Name	22.02.2021	23.02.2021	24.02.2021	25.02.2021	26.02.2021
1.	621118104001	AGNES TREESA	/	/	/	/	/
2.	621118104002	ANGEL J	/	/	/	/	/
3.	621118104003	APOORVASRI M	/	/	/	/	/
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5.	621118104005	BAVINA D	/	/	a	/	/
6.	621118104006	BHARATHI M	/	/	/	/	/
7.	621118104007	DEVIKA V	/	/	/	/	/
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34.	621118104036	SWATHI V	/	/	/	/	/
35.	621118104037	YUVASREE B	/	/	/	/	/

Course Co-ordinator

Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E., HOD  
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Ref: IECW/IT/SAL/2021

Date: 22.02.2021

## Add-on Course

Name of the Course: **Data -Analysis with JAMOV**

Academic Year: 2020-21

Course Duration: 18.12.2020-23.12.2020 (30 hours)

Year/Dept.: III/IT

## Students Attendance List

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11.	6211182050	ROSY J	/	/	/	a	/
12.	6211182050	SNEHA V	/	/	/	/	/
13.	6211182050	SWETHA M J	/	/	/	/	/
14.	6211182050	VAIJAYANTHI V	/	/	/	/	/
15.	6211182050	YAMUNASRI S	/	/	/	/	/
16.	6211182059	DHARANYA G R	/	/	/	/	/

  
Course Co-ordinator

  
HOD

  
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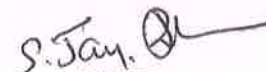
Ref: IECW/CSE/ER/2020-21

Date: 02.03.2021


## Event Report

Name of Activity: Add -On Course- <b>Data Analysis with JAMOVI</b>			
Organized by: Department of Computer Science and Engineering			
Date: <b>22.02.2021-26.02.2021</b>		Total Participants: <b>51</b>	
Resource Person: Details			
S. No.	Name of the Resource Persons	Designation	Institution & Place
1.	Sr.C. Jansi Sophia Mary	Assistant Professor	Department of Computer Science and Engineering- IECW, Chinnasalem
<p>The Department of Computer Science and Engineering, Idhaya Engineering College for Women, Chinnasalem, conducted as 30 hours Add- on Course on "<b>Data Analysis with JAMOVI</b>" from 22<sup>nd</sup> February 2021 to 26<sup>th</sup> February 2021. Sr.C. Jansi Sophia Mary, Assistant Professor /CSE were the resource person. The students from third year CSE &amp; IT actively attended the course. The course intended with an outcome of understanding the working of Data Analysis with JAMOVI practically.</p>			

  
Course Co-ordinator

  
HOD

  
Principal

  
**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**  
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Ref: IECW/CSE/ML/2021

Date: 02.03.2021

## Add-on Course

Name of the Course: **Data -Analysis with JAMOVI**

Academic Year: 2020-21

Course Duration: 22.02.2021-26.02.2021 (30 hours)

Year/Dept.: III/CSE

## Mark List

S. No	Roll No.	Name	Marks
			50
1.	621118104001	AGNES TREESA	39
2.	621118104002	ANGEL J	38
3.	621118104003	APOORVASRI M	45
4.	621118104004	BABYKALAIYARASI	47
5.	621118104005	BAVINA D	42
6.	621118104006	BHARATHI M	46
7.	621118104007	DEVIKA V	48
8.	621118104008	GAYATHRI S	46
9.	621118104009	HEMARITHI B	43
10.	621118104010	INBANILA A	40
11.	621118104012	KALAISELVI P	38
12.	621118104013	KALAIVANI J	45
13.	621118104038	KAVIYADHARSHINI	47
14.	621118104015	LYDIAL N	40
15.	621118104016	MADHUMITHA K	41
16.	621118104017	MARYSARAL A	42
17.	621118104018	MONICA CECILI V	43
18.	621118104019	NANDHINI P	44
19.	621118104021	NISHA V	44
20.	621118104022	PAVITHRA M	46
21.	621118104023	PREETHA A	48
22.	621118104024	PRIYA G	38
23.	621118104025	PRIYANKA K	39
24.	621118104026	RAGAVI K	40
25.	621118104027	RAMYA R	37
26.	621118104028	RAMYA T	41
27.	621118104029	RAVEENA R	43
28.	621118104030	RENUGADEVI M	46
29.	621118104031	SANDHIGA.M	39
30.	621118104032	SANGEETHA T	38
31.	621118104033	SHEELA V	45
32.	621118104034	SUBASRI E	47
33.	621118104035	SUBHA G	42
34.	621118104036	SWATHI V	46
35.	621118104037	YUVASREE B	48

Course Co-ordinator

IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.

HOD

Principal

S. Jay. B.



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

2(f) Status of UGC, An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/IT/ML/2021

Date: 02.03.2021

## Add-on Course

Name of the Course: **Data -Analysis with JAMOVl**

Academic Year: 2020-21

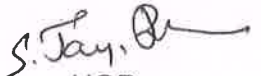
Course Duration: 22.02.2021-26.02.2021 (30 hours)


Year/Dept.: III/IT

## Mark List

S. No	Roll No.	Name	Marks
			50
1.	6211182050	AFREEN M	39
2.	6211182050	ANNAKKODI B	38
3.	6211182050	BHUVANESHWARI M	45
4.	6211182050	DHULSIN A	47
5.	6211182050	FARSHA T	42
6.	6211182050	HEENA J	46
7.	6211182050	INFANT DAICY T	48
8.	6211182050	JESTIN JEEVA Y	46
9.	6211182050	MADHUMITHA V	43
10.	6211182050	MONIKA S	40
11.	6211182050	ROSY J	38
12.	6211182050	SNEHA V	45
13.	6211182050	SWETHA M J	47
14.	6211182050	VAIJAYANTHI V	40
15.	6211182050	YAMUNASRI S	41
16.	6211182059	DHARANYA G R	42

  
Course Co-ordinator

  
HOD

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
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Permanently Affiliated Programmes – CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

### CERTIFICATE OF COMPLETION

This is to Certify that.....*Agnes Treesa . J*.....  
studying .....*III - CSE*..... has successfully completed.....*30 hours*..... Add-on Course  
on.....*Data Analysis with JAMOV1*..... conducted by the Department of  
.....*CSE*..... from .....*22.02.2021* to .....*26.02.2021*..... In the academic year .....*2020 - 2021*.....

  
Course co-ordinator

  
HOD

  
Principal  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT





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Permanently Affiliated Programmes – CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

### CERTIFICATE OF COMPLETION

This is to Certify that.....Marysara A.....  
studying .....III - CSE..... has successfully completed.....30 hours..... Add-on Course  
on.....Data Analysis with JAMOVI..... conducted by the Department of  
.....CSE..... from 22.02.2021 to 26.02.2021 In the academic year 2020-2021....

  
Course co-ordinator

  
HOD

  
Principal  
Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.I.S.T.E., F.I.E.  
PRINCIPAL  
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### CERTIFICATE OF COMPLETION

This is to Certify that..... Infant Daicy T .....


studying ..... III-II ..... has successfully completed..... 30 hours ..... Add-on Course

on..... Data Analysis with JAMOVI ..... conducted by the Department of

CSE ..... from 22.02.2021 to 26.02.2021 In the academic year 2020 - 2021 ..

  
Course co-ordinator

  
HOD

  
Principal  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE., F.I.E.  
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Permanently Affiliated Programmes – CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

### CERTIFICATE OF COMPLETION

This is to Certify that..... Jestin Teeva Y.....  
studying ..... III - IT..... has successfully completed..... 30 hours..... Add-on Course  
on..... Data Analysis With JAMOVI..... conducted by the Department of  
..... CSE..... from 22.02.2021 to 26.02.2021. In the academic year 2020 - 2021.....

  
Course co-ordinator

  
HOD

  
Principal  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE, FIE.  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
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Phone: 04151-258325, 258326

Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

---

## **FPGA ARCHITECTURE AND PROTOTYPING**



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

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Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref: IECW/ECE/RL/2021

Date: 18.02.2021

## Requisition Letter

To,

The Principal,  
Idhaya Engineering College for Women,  
Chinnasalem – 606201.

Through

Head of the Department,  
Department of Electronics and Communication Engineering,

Sub: Request for organising a 30 hours Add-on Course.

Dear Sir,

I, Mr. M. Mahesh, Assistant Professor in the Department of Electronics and Communication Engineering, would like to conduct a 30 hours add-on course with the objective of FPGAs are the present day tool for implementing many embedded applications. A basic understanding of digital electronics is very useful for the proper understanding of this topic. Basics of communication are also covered for further applications. The course is structured to include the learning of Verilog HDL syntax and the architecture of most prominent vendor in the FPGA market, Xilinx FPGAs and Altera FPGAs. Hands own experiments and a mini-project are included in the module on "FPGA Architecture and Prototyping" from 22.02.2021 to 26.02.2021 for third year ECE students. In this regard, I request you to give permission for the course.

Thanking you sir

Yours Sincerely

(Mr. M. Mahesh)

**Dr.R.GURUMANI**, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201. KALLAKURICHI DT.



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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/ECE/CC/2021

Date: 18.02.2021

## Add-on Course -Syllabus

Name of the Course: **FPGA Architecture and Prototyping**

Academic Year: 2020-21

**Course Objective:** FPGAs are the present day tool for implementing many embedded applications. A basic understanding of digital electronics is very useful for the proper understanding of this topic. Basics of communication are also covered for further applications. The course is structured to include the learning of Verilog HDL syntax and the architecture of most prominent vendor in the FPGA market, Xilinx FPGAs and Altera FPGAs. Hands own experiments and a mini-project are included in the module.


### Course Description:


- Introduction to Programmable Logic and FPGAs (4 hrs)
- Popular CPLD & FPGA Families (4 hrs)
  - Architecture of popular Xilinx and Altera FPGAs (4 hrs)
- FPGA Design Flow (3 hrs)
- Implementation Details (3hrs)
- Advanced FPGA Design tips (3 hrs)
- Logic Synthesis for FPGA (3 hrs)
- Static Timing Analysis (3 hrs)
- Design problems (Mini Project) ( 3 hrs)


**Total Hours 30**

### Course Outcomes:

- On completion, the participants will be able to: 1. Apply Verilog HDL for FPGA Programming  
2. Implement Digital Circuits on Xilinx FPGAs and Altera FPGAs using Verilog HDL

  
Course Co-ordinator

  
HOD

  
DR. R. GURUNATHAN, M.E., P.D., M.B.A., M.I.S.T.E., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
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Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref: IECW/ECE/CIR/2021

Date: 19.02.2021

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### CIRCULAR

The Department of Department of Electronics and Communication Engineering is offering "FPGA Architecture and Prototyping" as 30 hours Add- on Course for third year ECE students from 22.02.2021 to 26.02.2021 for the academic year 2020-2021. Mr. M. Mahesh., Assistant Professor /ECE will coordinate this course. Interested students can enrol their name for the course with Mr. M. Mahesh.

*J. Arjuna*  
HOD

Copy To:

1. Secretary for her kind information.
2. Principal
3. Vice Principal.
4. To circulate among the department staff members.
5. File.

CC To:

To read third year ECE class.

*Neeraj*  
**Dr.R.GURUMANI**, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL

IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT



IDHAYA ENGINEERING COLLEGE FOR  
WOMEN

CHINNASALEM - 605 201, KALLAKURICHI  
DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi. Affiliated to  
Anna University, Chennai.

**22nd February –  
26th February-2021  
Venue: LH 07- IECW**

**Mr. M. Mahesh,  
Assistant Professor/ECE**

**PARTICIPANTS:  
Third year ECE  
students**

**Last Date of Registration:  
20.02.2021**

**Phone: 04151-258325**





# IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/ECE/RL/2021

Date: 20.02.2021

## Add-On Course

Name of the Course: **FPGA Architecture and Prototyping**

Academic Year: 2020-21

Course Duration: 22.02.2021-26.02.2021 (30 hours)

Year/Dept.: **III/ECE**

## Registered Students

S. No	Roll No.	Name
1.	621118106001	AATHILAKSHMI P
2.	621118106002	ABINAYA A
3.	621118106003	AMIRTHA V
4.	621118106004	ANISHYA S
5.	621118106005	ARULMOZHI M
6.	621118106006	BHUVANESHWARI
7.	621118106007	HIMALDA
8.	621118106008	PRAVEENA B
9.	621118106010	RAJAKUMARI P
10.	621118106011	RATHI MEENA B
11.	621118106012	REENA S
12.	621118106013	SANGAVI D
13.	621118106014	SHANMUGAPRIYA.
14.	621118106015	SOWMIYA R
15.	621118106016	USHA D
16.	621118106017	VIDHYA T

  
Course Co-ordinator

  
HOD

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL

IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/ECE/SAL/2021

Date: 22.02.2021

## Add-on Course

Name of the Course: **FPGA Architecture and Prototyping**


Academic Year: 2020-21

Course Duration: 22.02.2021-26.02.2021 (30 hours)

Year/Dept.: **III/ECE**

## Students Attendance List

S. No	Roll No.	Name	22.02.2021	23.02.2021	24.02.2021	25.02.2021	26.02.2021
1.	621118106001	AATHILAKSHMI P	/	/	/	/	/
2.	621118106002	ABINAYA A	/	/	/	/	/
3.	621118106003	AMIRTHA V	/	/	/	/	/
4.	621118106004	ANISHYA S	/	/	/	/	/
5.	621118106005	ARULMOZHI M	/	/	/	/	a
6.	621118106006	BHUVANESHWARI	/	/	/	/	/
7.	621118106007	HIMALDA	/	/	/	/	/
8.	621118106008	PRAVEENA B	/	/	/	/	/
9.	621118106010	RAJAKUMARI P	/	/	/	/	/
10.	621118106011	RATHI MEENA B	/	/	/	a	/
11.	621118106012	REENA S	/	/	/	/	/
12.	621118106013	SANGAVI D	/	/	/	/	/
13.	621118106014	SHANMUGAPRIYA.	/	/	/	/	/
14.	621118106015	SOWMIYA R	/	/	/	/	/
15.	621118106016	USHA D	/	/	/	/	/
16.	621118106017	VIDHYA T	/	/	/	/	/

  
Course Co-ordinator

  
HOD

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.  
PRINCIPAL

IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/ECE/ER/2021

Date: 02.03.2021

## Event Report

Name of Activity: Add On Course- FPGA Architecture and Prototyping			
Organized by: Electronics And Communication Engineering			
Date: 22.02.2021-26.02.2021		Total Participants:16	
Resource Person: Details			
S. No.	Name of the Resource Persons	Designation	Institution & Place
1.	Mr. M. Mahesh	Assistant Professor	Department of Electronics And Communication Engineering -IECW, Chinnasalem
For the benefits of student's The department of Electronics and Communication Engineering, Idhaya Engineering College For Women, Chinnasalem. Conducted as 30 hours Add-on Course on <b>FPGA Architecture and Prototyping</b> from 22.02.2021 to 26.02.2021. Mr. M. Mahesh, Assistant Professor /ECE were the resource person. The students from third years ECE actively Participated in this course. The courses ended with the outcome of the students can Apply Verilog HDL for FPGA Programming and Implement Digital Circuits on Xilinx FPGAs and Altera FPGAs using Verilog HDL.			

Course Co-ordinator

HOD

Principal

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,

PRINCIPAL

IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT



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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/ECE/ML/2021

Date: 02.03.2021

## Add-on Course

Name of the Course: **FPGA Architecture and Prototyping**

Academic Year: 2020-21

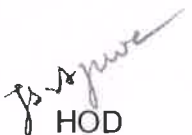
Course Duration: 22.02.2021-26.02.2021 (30 hours)

Year/Dept.: III/ECE

## Mark List

S. No	Roll No.	Name	Marks 50
1.	621118106001	AATHILAKSHMI P	41
2.	621118106002	ABINAYA A	42
3.	621118106003	AMIRTHA V	39
4.	621118106004	ANISHYA S	38
5.	621118106005	ARULMOZHI M	45
6.	621118106006	BHUVANESHWARI	47
7.	621118106007	HIMALDA	42
8.	621118106008	PRAVEENA B	46
9.	621118106010	RAJAKUMARI P	48
10.	621118106011	RATHI MEENA B	37
11.	621118106012	REENA S	39
12.	621118106013	SANGAVI D	42
13.	621118106014	SHANMUGAPRIYA.	39
14.	621118106015	SOWMIYA R	44
15.	621118106016	USHA D	40
16.	621118106017	VIDHYA T	43

  
Course Co-ordinator

  
HOD

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,

PRINCIPAL

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## Chinnasalem – 606201, Kallakurichi Dt.

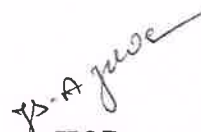
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Permanently Affiliated Programmes - CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

### CERTIFICATE OF COMPLETION

This is to Certify that.....Anishya . S.....  
studying .....III - ECE..... has successfully completed.....30 hours..... Add-on Course  
on.....FPGA Architecture and Prototyping..... conducted by the Department of  
.....ECE..... from 28.02.2021 to 26.02.2021. In the academic year 2020 - 2021...

  
Course co-ordinator

  
HOD

  
Principal  
Dr. R. GURUMANI, M.E. Ph.D. MBA, MISTE, FIC,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



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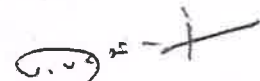
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### CERTIFICATE OF COMPLETION

This is to Certify that.....Sowmiya. R.....  
studying .....III - ECE..... has successfully completed.....30 hours..... Add-on Course  
on.....FPGA Architecture and Prototyping..... conducted by the Department of  
.....ECE..... from 22.02.2021 to 26.02.2021 In the academic year 2020-2021..

  
Course co-ordinator

  
HOD

  
Principal  
Dr. R. GURUMANI, M.E., Ph.D., M.A., MISTE.,  
PRINCIPAL  
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### CERTIFICATE OF COMPLETION

This is to Certify that.....Pathimeena B.....  
studying .....III - ECE..... has successfully completed.....30 hours..... Add-on Course  
on.....FPGA Architecture and Prototyping..... conducted by the Department of  
.....ECE..... from 22.02.2021 to 26.02.2021. In the academic year 2020 - 2021 .:

Course co-ordinator

HOD

Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,

PRINCIPAL

IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT

Principal



# **IDHAYA ENGINEERING COLLEGE FOR WOMEN**

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

2(f) Status of UGC, An ISO 9001: 2015 Certified Institution

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Phone: 04151-258325, 258326

Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

---

## **PCB & CIRCUIT DESIGNING**





# IDHAYA ENGINEERING COLLEGE FOR WOMEN

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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref: IECW/EEE/RL/2020

Date: 18.02.2021

## Requisition Letter

To:

The Principal,  
Idhaya Engineering College for Women,  
Chinnasalem – 606201.

Through:

Head of the Department,  
Department of Electrical and Electronics Engineering.

Sub: Request for organising a 30 hours Add-on Course.

Dear Sir,

I, Ms. Devi Priya V, Assistant Professor in the Department of Electrical and Electronics Engineering, would like to conduct a 30 hours Add-on Course with objective of PCB (Printed Circuit Board) designing is an integral part of each electronics products and this program is designed to make students capable to design their own projects PCB up to industrial grade on "PCB & Circuit Designing" from 22.02.2021 to 26.02.2021 for third year EEE students. In this regards, I request you to give permission for the course.

Thanking you sir.

Yours Sincerely

Ms. Devi Priya V.

*Gurumani*  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref: IECW/EEE/CC/2021

Date: 18.02.2021

## Add-on Course- Syllabus

Name of the Course: **PCB & Circuit Designing**

Academic Year: 2020-21

### Course Objectives:

This is a basic course for designing of PCB using software. PCB (Printed Circuit Board) designing is an integral part of each electronics products and this program is designed to make students capable to design their own projects PCB up to industrial grade.

#### Module 1 Introduction to Circuit Designing


6

- » Fundamental of circuit design
- » Creating New Components
- » Introduction to Analog Circuit Design
- » Introduction to Digital Circuit Design
- » Placing Symbols and Ports
- » Labeling components
- » Circuit optimization

#### Module 2 Introduction to PCB Design

6

- » Definition and Evolution of PCB
- » Purposes of a PCB
- » Types of PCBs
- » Creating the Blank PCB
- » Defining a sheet template
- » Printed Circuit Technology
- » PCB Construction (Power and Ground Plane)
- » PCB Printing & Etching process
- » Defining the Board Shape & Placement Boundary
- » **Creating a board outline & placement / routing boundary**

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL

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<b>Module 3</b>	<b>PCB Schematic</b>	<b>6</b>
	» Basic concepts of PCB Designing	
	» Schematic capture	
	» From schematic to PCB	
	» Design structure	
	» Placing, editing, and connecting parts and electrical symbols	
	» Adding and editing graphics and text	
	» Changing your view of a schematic page	
	» Creating and editing parts	
	» About the processing tools	
	» Preparing to create a net list	
	» Creating a net list	
	» Creating reports	
	» Exporting and importing schematic data	
<b>Module 4</b>	<b>PCB Editor</b>	<b>6</b>
	» PCB Material.	
	» Using the PCB Editor panel.	
	» PCB Editor Preferences.	
	» Board Options dialog.	
	» Board Layers and Colors.	
	» Grids.	
<b>Module 5</b>	<b>PCB layers</b>	<b>6</b>
	» Enabling Layers.	
	» Layer definitions.	
	» Defining the Electrical Layer	
	» Defining Mechanical layers.	
	» Defining PWR/GND layers.	

*R. Gurumani*  
Dr. R. GURUMANI, M.E., PH.D., M.B.A., M.I.S.T.E., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Explain the importance of controllability and observability in the debugging process-Describe common debugging architectures for embedded systems-Explain how the UART Serial communication protocol works-Describe how the Arduino Serial library performs serial communication.

Course Co-ordinator

HOD

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.  
IDHAYA ENGINEERING COLLEGE FOR WOMEN  
PRINCIPAL DR. R. GURUMAYI M.E., PH.D., M.B.A., M.M.S.TE.F.R.E.  
CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.



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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/EEE/CIR/2021

Date: 18.02.2021

## ELECTRICAL AND ELECTRONICS ENGINEERING

### CIRCULAR

The Department of Electrical and Electronics Engineering is offering "PCB & Circuit Designing" as 30 hours Add-on Course for third year EEE students from 22.02.2021 to 26.02.2021 for the academic year 2020-2021. Ms. Devi Priya V, Assistant Professor/EEE will coordinate this course. Interested students can enrol their name for the course with Ms. Devi Priya.

  
HOD

Copy To:

1. Secretary for her kind information.
2. Principal
3. Vice Principal.
4. To circulate among the department staff members.
5. File.

CC To:

To read third year EEE class.

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT



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**DISTRICT, TAMIL NADU, INDIA.**

Approved by AICTE, New Delhi,

Affiliated to Anna University, Chennai.

**ADD ON COURSE**  
**ON**  
**"PCB & CIRCUIT**  
**DESIGNING"**

**22nd February - 26th**  
**February-2021**

*Ms. Devi Priya V.,*  
*Assistant Professor/EEE*

**Objectives:**

This is a basic course for designing of PCB using software. PCB (Printed Circuit Board) designing is an integral part of each electronics products and this program is designed to make students capable to design their own projects PCB up to industrial grade.

**PARTICIPANTS:**

**Third year EEE students**

**Venue: LH 04 -IECW**

**IMPORTANT DATES:**

**Last Date of Registration:**

**20.02.2021**

**Phone: 04151-258325,**  
**258326**

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**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**  
**PRINCIPAL**

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**CHINNASALEM-606 201. KALLAKURICHI DT.**



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/EEE/SR/2021

Date: 20.02.2021

## Add-on Course

Name of the Course: **PCB & Circuit Designing**

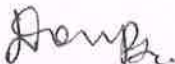
Academic Year: 2020-21

Course Duration: **22.02.2021-26.02.2021 (30 hours)**

Year/Dept: III/EEE

## Registered Students

S. No	Roll No.	Name
1.	621118105001	AGASTIYA K
2.	621118103003	CHANDHINI S
3.	621118102004	INDIRA N
4.	621118101005	KAVIYA S
5.	621118100006	MADHUBALA S
6.	621118099007	PAVEENA P
7.	621118098008	PAVENDHIRA M
8.	621118097009	PRAVINA V

  
Course Co-ordinator

  
HOD

  
**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/EEE/SAL/2021

Date: 22.02.2021

Add-on Course

Name of the Course: **PCB & Circuit Designing**

Academic Year: 2020-21

Course Duration: 22.02.2021-26.02.2021 (30 hours)

Year/Dept.: III/EEE

## Students Attendance List

S. No	Roll No.	Name	22.02.2021	23.02.2021	24.02.2021	25.02.2021	26.02.2021
1.	6211181050	AGASTIYA K	/	/	/	/	/
2.	6211181030	CHANDHINI S	/	/	/	/	/
3.	6211181020	INDIRA N	/	/	/	/	/
4.	6211181010	KAVIYA S	/	/	/	/	/
5.	6211181000	MADHUBALA	/	/	/	/	/
6.	6211180990	PAVEENA P	/	/	/	/	/
7.	6211180980	PAVENDHIRA	/	/	/	/	/
8.	6211180970	PRAVINA V	/	/	/	/	/

Course Co-ordinator

HOD

Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL

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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/EEE/ER/2021

Date: 02.03.2021

## Event Report

Name of Activity: Add -on Course: <b>PCB &amp; Circuit Designing</b>			
Organized by: Electrical and Electronics Engineering			
Date: 22.02.2021-26.02.2021		Total Participants: 08	
Resource Person: Details			
S. No.	Name of the Resource Persons	Designation	Institution & Place
1.	Ms. Devi Priya	Assistant Professor	Electrical and Electronics Engineering -IECW, Chinnasalem
<p>The Department of Electrical and Electronics Engineering, Idhaya Engineering College for Women, Chinnasalem, conducted as 30 hours Add- on Course on "PCB &amp; Circuit Designing" from 22<sup>nd</sup> February 2021 to 26<sup>th</sup> February 2021. Ms. Devi Priya, Assistant Professor /EEE were the resource person. The students from third year EEE actively attended the course. The course ended with an outcome of the students will be able to understand the working of PCB &amp; Circuit Designing and understand the PCB &amp; Circuit Designing practically.</p>			

Course Coordinator

H.O.D

Principal

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/EEE/ML/2021

Date: 02.03.2021

## Add-on Course

Name of the Course: **PCB & Circuit Designing**

Academic Year: 2020-21

Course Duration: 22.02.2021-26.02.2021 (30 hours)


Year/Dept.: III/EEE

## Mark List

S. No	Roll No.	Name	Marks So
1.	621118105001	AGASTIYA K	44
2.	621118103003	CHANDHINI S	40
3.	621118102004	INDIRA N	38
4.	621118101005	KAVIYA S	45
5.	621118100006	MADHUBALA S	47
6.	621118099007	PAVEENA P	40
7.	621118098008	PAVENDHIRA M	41
8.	621118097009	PRAVINA V	42

Course Co-ordinator

HOD

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



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Permanently Affiliated Programmes – CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

### CERTIFICATE OF COMPLETION

This is to Certify that..... Agasthya. K......  
studying ..... III - EEE..... has successfully completed..... 30 hours..... Add-on Course  
on..... PCB - & Circuit Designing..... conducted by the Department of  
..... EEE..... from 22.02.2021 to 26.02.2021. In the academic year 2020 - 2021..

Course co-ordinator

HOD

Dr. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE, F.  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
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Permanently Affiliated Programmes – CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

### CERTIFICATE OF COMPLETION

This is to Certify that.....Kaviya : S.....  
studying .....III - EEE..... has successfully completed.....30 hours..... Add-on Course  
on.....PCB & Circuit Designing..... conducted by the Department of  
.....EEE..... from 22.02.2021 to 26.02.2021. In the academic year 2020 - 2021.....

  
Course co-ordinator

  
HOD

  
J.R. GURUNIAN, M.E., P.H.D., M.B.A., MISTE., F.I.E.,  
PRINCIPAL

  
Principal

IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



# IDHAYA ENGINEERING COLLEGE FOR WOMEN Chinnasalem – 606201, Kallakurichi Dt.

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Permanently Affiliated Programmes – CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

## CERTIFICATE OF COMPLETION

This is to Certify that.....**S. Madhubala**.....  
studying .....**III - EEE**..... has successfully completed.....**50 hours**..... Add-on Course  
on.....**PCB & Circuit Designing**..... conducted by the Department of  
.....**EEE**..... from **22.02.2021** to **26.02.2021**. In the academic year **2020 - 2021**.....

*V. Deepa*  
Course co-ordinator

*S. Madhubala*  
HOD

*years*

*M. Manjula*  
Principal

**M. K. GUKULAVATHI, M.E., Ph.D.,**  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

---

## **STATISTICS WITH 'R' PROGRAMMING**



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref: IECW/CSE/RL/2021

Date: 18.02.2021

## Requisition Letter

To .

The Principal,  
Idhaya Engineering College for Women,  
Chinnasalem – 606201.

Through .

Head of the Department,  
Department of Computer Science Engineering


Sub: Request for organising a 30 hours Add on course.

Dear Sir,

I, Mr.S.Prabakaran, Assistant Professor in the Department of Computer Science Engineering, would like to conduct a 30 hours add- on course with the objective of the course will provide students with an introduction to applied statistics with R and R Studio, experienced with the high-level programming language R, an environment for data analysis and graphics, and the use of the R Studio interface and its functionalities to perform reproducible research projects. Second, to become experienced with basic statistical techniques, rigorously implemented in R. Third, to begin the study of more advanced statistical methods on the basis of case studies from challenging real-world problems on "Statistics with 'R' Programming" from 22.02.2021-26.02.2021 for Second year CSE & IT students. In this regards, I request you to give permission for the course.

Thanking you sir.

Yours Sincerely

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.

(Mr. S. Prabakaran)



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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref: IECW/CSE/CC/2021

Date: 18.02.2021

## Add-on Course- Syllabus

Name of the Course: **Statistics with 'R' Programming**  
2020-21

Academic Year:

### Course Objectives:

This course will provide students with an introduction to applied statistics with R and R Studio. Specific objectives: first, to become experienced with the high-level programming language R, an environment for data analysis and graphics, and the use of the R Studio interface and its functionalities to perform reproducible research projects. Second, to become experienced with basic statistical techniques, rigorously implemented in R. Third, to begin the study of more advanced statistical methods on the basis of case studies from challenging real-world problems.

- Day - I** Introduction, How to run R, R Sessions and Functions, Basic Math, 6  
Variables, Data Types, Vectors, Conclusion, Advanced Data Structures,  
Data Frames, Lists, Matrices, Arrays, Classes.
- Day -II** R Programming Structures, Control Statements, Loops, - Looping Over 6  
Nonvector Sets,- If-Else, Arithmetic and Boolean Operators and values,  
Default Values for Argument, Return Values, Deciding Whether to explicitly  
call return- Returning Complex Objects, Functions are Objective, No  
Pointers in R, Recursion, A Quicksort Implementation-Extended Extended  
Example: A Binary Search Tree.
- Day-III** Doing Math and Simulation in R, Math Function, Extended Example 6  
Calculating Probability- Cumulative Sums and Products-Minima and  
Maxima- Calculus, Functions Fir Statistical Distribution, Sorting, Linear  
Algebra Operation on Vectors and Matrices, Extended Example: Vector  
cross Product- Extended Example: Finding Stationary Distribution of

*Ramani*  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.





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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)


Markov Chains, Set Operation, Input /output, Accessing the Keyboard and Monitor, Reading and writer Files

- Day-IV** Graphics, Creating Graphs, The Workhorse of R Base Graphics, the plot() 6  
Function – Customizing Graphs, Saving Graphs to Files ,Probability Distributions, Normal Distribution- Binomial Distribution- Poisson Distributions Other Distribution, Basic Statistics, Correlation and Covariance, T-Tests,-ANOVA.
- Day-V** Linear Models, Simple Linear Regression, -Multiple Regression 6  
Generalized Linear Models, Logistic Regression, - Poisson Regression- other Generalized Linear Models-Survival Analysis, Nonlinear Models, Splines- Decision- Random Forests

**Total Hours 30**

## Course Outcomes:

After completion of the course, the students experienced with the high-level programming language R, an environment for data analysis and graphics, and the use of the R Studio interface and its functionalities to perform reproducible research projects.

  
Course Co-ordinator.

  
HOD

*M. R. G.*  
**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**  
**PRINCIPAL**  
**IDHAYA ENGG. COLLEGE FOR WOMEN**  
**CHINNASALEM-606 201, KALLAKURICHI DT.**



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/CSE/CIR/2021

Date: 18.02.2021

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### CIRCULAR

The Department of Computer Science and Engineering is offering "Statistics with 'R' Programming" as 30 hours Add-on Course for Second year CSE& IT students from 22.02.2021-26.02.2021 for the academic year 2020-2021. Mr.S.Prabakaran, Assistant Professor /CSE will coordinate this course. Interested students can enrol their name for the Course with Mr.S.Prabakaran.

*S.P.*  
HOD

Copy To:

1. Secretary for her kind information.
2. Principal
3. Vice Principal.
4. HOD ( IT )
5. To circulate among the department staff members.
6. File.

CC To:

To read second year CSE& IT classes.

*R. Gurumani*  
R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



**IDHAYA ENGINEERING COLLEGE FOR WOMEN**  
**CHINNASALEM-606 201, KALLAKURICHI**  
**DISTRICT, TAMIL NADU, INDIA.**  
Approved by AICTE, New Delhi, Affiliated  
to Anna University, Chennai.

**Add on Course**  
**On**



# Statistics with 'R' Programming

*Praveen*  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE, F.I.L.,  
PRINCIPAL  
IDHAYA ENGINEERING COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT

**22nd February – 26th February-2021**

**Mr.S.Prabakaran, Assistant Professor /CSE**

**PARTICIPANTS:**

**Second year CSE & IT students**

**objectives:**

To become experienced with the high-level programming language R, an environment for data analysis and graphics, and the use of the R Studio interface and its functionalities to perform reproducible research projects

**Venue: LH 14- IECW**

**Important Dates:20.02.2021**

**CALL US:**  
**04151-2583255**



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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/CSE/SR/2021

Date: 20.02.2021

## Add-on Course

Name of the Course: **Statistics with 'R' Programming**

Academic Year: 2020-21

Course Duration: **22.02.2021-26.02.2021 (30 hours)**

Year/Dept.: II/CSE

## Registered Students

S. No	Roll No.	Name
1.	621119104001	ABINAYA S
2.	621119104003	ANCY A
3.	621119104004	BHUVANESHWARI
4.	621119104005	DEEPA D
5.	621119104007	HARINITHA J
6.	621119104008	INFANT ROSHINI G
7.	621119104010	KRISHNAPRIYA S
8.	621119104011	MEERA K
9.	621119104012	NIRMALA P
10.	621119104013	PRIYADHARSHINI
11.	621119104014	PRIYA JENCY S
12.	621119104015	SANDHIYA M
13.	621119104016	SAVITHA M
14.	621119104017	SNEHA S B
15.	621119104018	SNEKA I
16.	621119104019	SOWMIYA A
17.	621119104020	SUBA M
18.	621119104023	YASHWINI A

  
Course Co-ordinator



  
HOD

Dr. R. GURUMATHI, M.E., Ph.D., M.B.A., MISTE., FIE.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
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Ref: IECW/IT/SR/2020-21

Date: 20.02.2021

## Add -on Course

Name of the Course: **Statistics with 'R' Programming**


Academic Year: 2020-21

Course Duration: 22.02.2021-26.02.2021 (30 hours)


Year/Dept.: II/IT

## Registered Students

S. No	Roll No.	Name
1.	6211192050	ABINAYA S
2.	6211192050	DAYANAMARY C
3.	6211192050	MAGIMAI ILAKKIYA
4.	6211192050	NISHA M
5.	6211192050	RAMANI M
6.	6211192050	SARANYA V
7.	6211192050	VANISRI K

  
Course Co-ordinator

  
HOD

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE, F.I.E.,  
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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/CSE/SAL/2021

Date: 22.02.2021

## Add-on Course

Name of the Course: **Statistics with 'R' Programming**

Academic Year: 2020-21


Course Duration: 22.02.2021-26.02.2021 (30 hours)

Year/Dept.: II/CSE

## Students Attendance List

S. No	Roll No.	Name	22.02.2021	23.02.2021	24.02.2021	25.02.2021	26.02.2021
1.	62111910400	ABINAYA S	/	/	/	ca	/
2.	62111910400	ANCY A	/	/	/	/	/
3.	62111910400	BHUVANESHWA	/	/	/	/	/
4.	62111910400	DEEPA D	/	/	/	/	/
5.	62111910400	HARINITHA J	/	/	/	/	/
6.	62111910400	INFANT ROSHINI	/	/	/	/	/
7.	62111910401	KRISHNAPRIYA S	/	/	/	/	/
8.	62111910401	MEERA K	/	/	/	/	/
9.	62111910401	NIRMALA P	a	/	/	/	/
10.	62111910401	PRIYADHARSHINI	/	/	/	/	/
11.	62111910401	PRIYA JENCY S	/	/	/	/	/
12.	62111910401	SANDHIYA M	/	/	/	/	/
13.	62111910401	SAVITHA M	/	/	/	/	/
14.	62111910401	SNEHA S B	/	/	/	/	/
15.	62111910401	SNEKA I	/	/	/	/	/
16.	62111910401	SOWMIYA A	/	/	/	/	/
17.	62111910402	SUBA M	/	/	/	/	/
18.	62111910402	YASHWINI A	/	/	/	/	/

  
Course Co-ordinator

  
Dr. R. GURUNATHAN, M.E., Ph.D., M.B.A., MISTE., F.I.C.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.

  
HOD



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Ref: IECW/IT/SAL/2021

Date: 22.02.2021

## Add-On Course

Name of the Course: **Statistics with 'R' Programming**

Academic Year: 2020-21


Course Duration: 22.02.2021-26.02.2021 (30 hours)


Year/Dept.: II/IT

## Students Attendance List

S. No	Roll No.	Name	22.02.2021	23.02.2021	24.02.2021	25.02.2021	26.02.2021
1.	621119205001	ABINAYA S	/	/	/	/	/
2.	621119205002	DAYANAMARY C	/	/	/	/	/
3.	621119205004	MAGIMAI ILAKKIYA MARY C	/	/	/	/	/
4.	621119205005	NISHA M	/	/	/	/	/
5.	621119205006	RAMANI M	/	/	/	/	/
6.	621119205007	SARANYA V	/	/	/	/	/
7.	621119205008	VANISRI K	/	/	/	/	/

  
Course Co-ordinator

  
HOD

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.I.S.T.E., F.I.E.,  
PRINCIPAL  
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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/CSE/ER/2020-21

Date: 02.03.2021

## Event Report

Name of Activity: Add- On Course: <b>Statistics with 'R' Programming</b>			
Organized by: Computer Science Engineering			
Date: 22.02.2021-26.02.2021		Total Participants:25	
Resource Person:			
S. No.	Name of the Resource Persons	Designation	Institution & Place
1.	Mr.S.Prabakaran	Assistant Professor	Department of Computer Science Engineering - IECW, Chinnasalem
<p>For the benefits of student's The department of Computer Science Engineering, Idhaya Engineering College For Women, Chinnasalem. Conducted as 30 hours Add-on Course on Statistics with 'R' Programming from 22.02.2021 to 26.02.2021. Mr.S.Prabakaran, Assistant Professor /CSE were the resource person. The students from second year CSE &amp; IT actively Participated in this course. The course ended with the outcome of the students experienced with the high-level programming language R, an environment for data analysis and graphics, and the use of the R Studio interface and its functionalities to perform reproducible research projects.</p>			

  
Course Co-ordinator

  
HOD  
Dr.R.GURUMANI, M.E., Ph.D., M.B.A., MISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.

  
Principal





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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/CSE/ML/2021

Date: 02.03.2021

## Add-on Course

Name of the Course: **Statistics with 'R' Programming**


Academic Year: 2020-21


Course Duration: 22.02.2021-26.02.2021 (30hours)

Year/Dept.: II/CSE

## Mark List

S. No	Roll No.	Name	Marks
1.	621119104001	ABINAYA S	47
2.	621119104003	ANCY A	42
3.	621119104004	BHUVANESHWARI M	46
4.	621119104005	DEEPA D	48
5.	621119104007	HARINITHA J	37
6.	621119104008	INFANT ROSHINI G	39
7.	621119104010	KRISHNAPRIYA S	42
8.	621119104011	MEERA K	39
9.	621119104012	NIRMALA P	44
10.	621119104013	PRIYADHARSHINI M	40
11.	621119104014	PRIYA JENCY S	43
12.	621119104015	SANDHIYA M	39
13.	621119104016	SAVITHA M	44
14.	621119104017	SNEHA S B	46
15.	621119104018	SNEKA I	43
16.	621119104019	SOWMIYA A	40
17.	621119104020	SUBA M	38
18.	621119104023	YASHWINI A	45

  
Course Co-ordinator

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE., FOD  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT



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Ref: IECW/IT/ML/2021

Date: 02.03.2021

## Add-on Course

Name of the Course: **Statistics with 'R' Programming**

Academic Year: 2020-21


Course Duration: 22.02.2021-26.02.2021 (30hours)

Year/Dept.: II/IT

## Mark List

S. No	Roll No.	Name	Marks
			50
1.	6211192050	ABINAYA S	41
2.	6211192050	DAYANAMARY C	43
3.	6211192050	MAGIMAI ILAKKIYA	46
4.	6211192050	NISHA M	44
5.	6211192050	RAMANI M	48
6.	6211192050	SARANYA V	40
7.	6211192050	VANISRI K	41

  
Course Co-ordinator

  
Jr.R.GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
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## Chinnasalem – 606201, Kallakurichi Dt.


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 Permanently Affiliated Programmes – CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

### CERTIFICATE OF COMPLETION

This is to Certify that.....Ancy..A.....  
 studying .....II - CSE..... has successfully completed.....60 hours..... Add-on Course  
 on.....Statistics With 'R' Programming..... conducted by the Department of  
 .....CSE..... from 22.02.2021 to 26.02.2021.. In the academic year 2020-2021.....

  
**Course co-ordinator**

  
**HOD**

  
**Principal**  
 DR. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE., FIIT  
 PRINCIPAL  
 IDHAYA ENGG. COLLEGE FOR WOMEN  
 CHINNASALEM-606 201, KALLAKURICHI DT.



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Permanently Affiliated Programmes - CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

## CERTIFICATE OF COMPLETION

This is to Certify that.....C. Dayana Mary.....  
studying .....II - II..... has successfully completed.....60 hours..... Add-on Course  
on.....Statistics with 'R' Programming..... conducted by the Department of  
.....CSE..... from 22.02.2021 to 26.02.2021 In the academic year 2020 - 2021..

  
Course co-ordinator

  
HOD

  
Principal  
Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.I.S.T.E., F.I.I.T.  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT



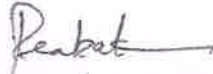
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Permanently Affiliated Programmes – CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

### CERTIFICATE OF COMPLETION

This is to Certify that.....C. Magimai Slakshya Mary.....  
studying II-II..... has successfully completed 60 hours..... Add-on Course  
on Statistics With 'R' Programming..... conducted by the Department of  
CSE..... from 22.02.2021 to 26.02.2021... In the academic year 2020-2021...

  
Course co-ordinator

  
HOD

  
Principal  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE.F.  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT



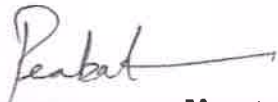
# IDHAYA ENGINEERING COLLEGE FOR WOMEN

## Chinnasalem – 606201, Kallakurichi Dt.


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Permanently Affiliated Programmes – CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

### CERTIFICATE OF COMPLETION

This is to Certify that.....M. Suba.....  
studying .....II - CSE..... has successfully completed.....60 hours..... Add-on Course  
on.....Statistics With 'R' Programming..... conducted by the Department of  
.....CSE..... from 22.02.2021.. to 26.02.2021.. In the academic year 2020.....2021..

  
Course co-ordinator

  
HOD

  
Principal  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE., F.  
PRINCIPAL  
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Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

---

## **THE ARDUINO PLATFORM AND C PROGRAMMING**



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref: IECW/EEE/RL/2021

Date: 15.02.2021

## Requisition Letter

To.

The Principal,  
Idhaya Engineering College for Women,  
Chinnasalem – 606201.

Through

Head of the Department,  
Department of Electrical and Electronics Engineering,

Sub: Request for organising a 30 hours Add-on Course.

Dear Sir,

I, Mr. S. Silambarasan, Assistant Professor in the Department of Electrical and Electronics Engineering, would like to conduct a 30 hours Add-on Course with the objective of the Arduino is an open-source computer hardware/software platform for building digital devices and interactive objects that can sense and control the physical world around them. In this class students will learn how the Arduino platform works in terms of the physical board and libraries and the IDE (integrated development environment). Students will also learn about shields, which are smaller boards that plug into the main Arduino board to perform other functions such as sensing light, heat, GPS tracking, or providing a user interface display. The course will also cover programming the Arduino using C code and accessing the pins on the board via the software to control external devices. on "The Arduino Platform and C Programming" from 22.02.2021 to 26.02.2021 for second year EEE &ECE students. In this regards, I request you to give permission for the Course.

Thanking you sir.

Your Sincerely

(Mr. S. Silambarasan)

Dr. R. GURUBALAN, M.E., Ph.D., M.B.A., MISTE., Ph.D.  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT





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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref: IECW/EEE/CC/2021

Date: 15.02.2021

## Add-on Course Syllabus

Name of the Course: **The Arduino Platform and C Programming**

Academic Year: 2020-21

### Course Objectives:

The Arduino is an open-source computer hardware/software platform for building digital devices and interactive objects that can sense and control the physical world around them. In this class students will learn how the Arduino platform works in terms of the physical board and libraries and the IDE (integrated development environment). Students will also learn about shields, which are smaller boards that plug into the main Arduino board to perform other functions such as sensing light, heat, GPS tracking, or providing a user interface display. The course will also cover programming the Arduino using C code and accessing the pins on the board via the software to control external devices.

- Module-I      Arduino Environment This module provides an introduction to the Arduino environment which is composed of three things: the Arduino board, the Arduino IDE, and the Arduino-compatible shields together with their libraries. We first investigate the board, discussing all of its main components, inputs, and outputs. We discuss how each component is used and we examine the board schematic to see how they are connected. We then discuss the Arduino Integrated Development Environment (IDE) which is used primarily to write, compile, and upload code. We survey the interface of the IDE and discuss how to install and use it. We also examine the use of shields to extend the functionality of an Arduino-based system. We discuss how shield libraries provide a useful abstraction to facilitate programming. 8
- Module-II      C Programming This module covers the basics of the C programming language which will be used to write code for the Arduino. The course first covers basic syntax, variables, and types. Most of the basic C operators 8

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**CHINNASALEM-606 201, KALLAKURICHI**



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

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2(f) Status of UGC, An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326


Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

	are presented. Conditional statements (if, switch) and loops (while, for) are described. The concept of functions is presented together with how to define and call functions. Creation and use of global variables is explained.	
Module -III	This module describes the composition of an Arduino program, or sketch, and the process by which it is compiled and uploaded. The Arduino IDE is a user interface for the software tools which actually compile and upload the program. We outline the use of these tools in the build process. We describe the basic structure of a sketch, including the use of the setup() and loop() functions. The main interface of an Arduino is through its pins, so we describe how to access those pins from a sketch	7
Module-IV	This module is an introduction on debugging embedded software on an Arduino. We discuss the basic debugging requirements: controllability and observability. The debugging environment available for an Arduino UNO is limited, so we describe how to use the UART communication protocol to gain controllability and observability. We present the use of the Serial library to communicate with the Arduino through the serial monitor	7
	Total Hours	30

## Course Outcomes:

After completion of the course, the students will be able to do the composition of the Arduino development board-Describe what it means to program the board's firmware-Read board schematics-Install Arduino IDE-Describe what "shields" are and how they are used-Specify the role of libraries in the use of shields-Compile and run a program-Name C Variables and Types-Name common C operators-Use conditionals and loops-Explain functions, their definition and invocation- Explain the implications of global variables-Undertake the Arduino build process-Describe the role of the tools behind the IDE-Describe how to invoke functions in classes-Explain the structure of an Arduino sketch-Access the pins of the Arduino-Differentiate between digital and analog pin-Debug embedded software-

  
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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

## Design synchronization with schematic tool.

- » Resolving synchronization DRCs.
- » Design transfer using a Net list.

**Total Hours 30**

### Outcomes:

After completion of the course, the students will be able to understand the working of PCB & Circuit Designing. The students Will be able to understand PCB & Circuit Designing practically.

Course Co-ordinator

HOD

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Email ID: idhaya@iecw.edu.in

Ref: IECW/EEE/CIR/2021

Date: 16.02.2021

## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### CIRCULAR

The Department of Electrical and Electronics Engineering is offering The "Arduino Platform and C Programming" as 30 hours add-on Course for Second year EEE&ECE students from 22.02.2021 to 26.02.2021 for the academic year 2020-2021. Mr. S. Silambarasan, Assistant Professor /EEE will coordinate this course. Interested students can enrol their name for the Course with Mr. S. Silambarasan.

HOD

#### Copy To:

1. Secretary for her kind information.
2. Principal
3. Vice Principal.
4. HOD( ECE )
5. To circulate among the department staff members.
6. File.

#### CC To:

To read second year EEE&ECE classes.

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DISTRICT, TAMIL NADU, INDIA.

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University, Chennai.

*R. Guramani*  
Dr. R. GURUMANI, M.E., Ph.D.,  
PRINCIPAL

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Add on Course  
On

Arduino Platform and  
C Programming

22 nd February - 26 th February -2021

Mr. S. Silambarasan, Assistant Professor /EEE

Venue: LH 13- IECW

PARTICIPANTS:

Second year EEE & ECE students

IMPORTANT DATES:

Call:04151-258325

Last Date of Registration: 19.02.2021



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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/EEE/RL/2021

Date: 19.02.2021

## Add-on Course

Name of the Course: **The Arduino Platform and C Programing**

Academic Year: 2020-21

Course Duration: 22.02.2021-26.02.2021 (30 hours)

Year/Dept.: II/ECE

## Registered Students

S. No	Roll No.	Name
1.	621119106001	ABARNA A
2.	621119106002	AZHAGUNILA S
3.	621119106003	BANUMATHI N
4.	621119106004	BHAVANI E
5.	621119106007	GAYATHRI G
6.	621119106008	ISHWARIYA. P
7.	621119106009	JANANI G
8.	621119106010	JENIFER A
9.	621119106011	JENO JENCY P
10.	621119106012	JOTHIKA C
11.	621119106013	KALKI P
12.	621119106014	KALPANA T
13.	621119106015	KAYATHRI V
14.	621119106016	MADHUMITHA A
15.	621119106017	MUGILA R
16.	621119106018	RAGHAVI R
17.	621119106019	RESHMA S
18.	621119106021	SHALINI G
19.	621119106022	SHREEIN FATHIMA
20.	621119106023	SIDHARTHINI K S
21.	621119106024	SUBITHA K

Course Co-ordinator

HOD

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Ref: IECW/EEE/RL/2021

Date: 19.02.2021

## Add-on Course

Name of the Course: **The Arduino Platform and C Programing**

Academic Year: 2020-21

Course Duration: 22.02.2021-26.02.2021 (30 hours)

Year/Dept.: II/EEE

## Registered Students

S. No	Roll No.	Name
1.	6211191050	ANANDHI R
2.	6211191050	CHARUMATHI K
3.	6211191050	JANANI V
4.	6211191050	KAMALI S
5.	6211191050	KAVIYA S
6.	6211191050	MANISHA V
7.	6211191050	NANDHINI K
8.	6211191050	PAVITHRA G

Course Co-ordinator

HOD

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Ref: IECW/ECE/SAL/2021

Date: 22.02.2021

## Add-on Course

Name of the Course: **The Arduino Platform and C Programing**

Academic Year: 2020-21

Course Duration: 22.02.2021-26.02.2021 (30 hours)

Year/Dept: II/ECE

## Students Attendance List

S. No	Roll No.	Name	22.02.2021	23.02.2021	24.02.2021	25.02.2021	26.02.2021
1.	62111910600	ABARNA A	/	/	/	/	/
2.	62111910600	AZHAGUNILA S	/	/	/	/	/
3.	62111910600	BANUMATHI N	/	/	/	/	/
4.	62111910600	BHAVANI E	/	/	/	/	/
5.	62111910600	GAYATHRI G	/	/	/	/	/
6.	62111910600	ISHWARIYA. P	/	/	/	/	/
7.	62111910600	JANANI G	/	a	/	/	/
8.	62111910601	JENIFER A	/	/	/	/	/
9.	62111910601	JENO JENCY P	/	/	/	/	/
10.	62111910601	JOTHIKA C	/	/	/	/	/
11.	62111910601	KALKI P	/	/	/	/	/
12.	62111910601	KALPANA T	/	/	/	/	/
13.	62111910601	KAYATHRI V	/	/	/	/	/
14.	62111910601	MADHUMITHA A	/	/	/	/	/
15.	62111910601	MUGILA R	/	/	/	/	/
16.	62111910601	RAGHAVI R	/	/	/	/	/
17.	62111910601	RESHMA S	/	/	a	/	/
18.	62111910602	SHALINI G	/	/	/	/	/
19.	62111910602	SHREEIN	/	/	/	/	/
20.	62111910602	SIDHARTHINI K	/	/	/	/	/
21.	62111910602	SUBITHA K	/	/	/	/	/

Course Co-ordinator

HOD

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Ref: IECW/EEE/SAL/2021

Date: 22.02.2021

## Add-On Course

Name of the Course: **The Arduino Platform and C Programming**

Academic Year: 2020-21

Course Duration: 22.02.2021-26.02.2021 (30 hours)

Year/Dept: II/EEE

## Students Attendance List

S. No	Roll No.	Name	22.02.2021	23.02.2021	24.02.2021	25.02.2021	26.02.2021
1.	6211191050	ANANDHI R	/	/	/	/	/
2.	6211191050	CHARUMATHI	/	/	/	/	/
3.	6211191050	JANANI V	/	/	/	/	/
4.	6211191050	KAMALI S	/	/	/	/	/
5.	6211191050	KAVIYA S	/	/	/	/	/
6.	6211191050	MANISHA V	/	/	/	/	/
7.	6211191050	NANDHINI K	/	/	/	/	/
8.	6211191050	PAVITHRA G	/	/	/	/	/

Course Co-ordinator

HOD

Dr. R. GURUMIANI, M.E., Ph.D., M.B.A., MISTE., F.I.E.,

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Email ID: idhaya@iecw.edu.in

Ref: IECW/ECE/ER/2020-21

Date: 02.03.2021

## Event Report

Name of Activity: Add- On Course: The Arduino Platform and C Programing			
Organized by: Electrical and Electronics Engineering			
Date: 22.02.2021-26.02.2021		Total Participants:29	
Resource Person: Details			
S. No.	Name of the Resource Persons	Designation	Institution & Place
1.	Mr. S. Silambarasan	Assistant Professor	Department of Electrical and Electronics Engineering - IECW, Chinnasalem
<p>For the benefits of student's The department of Electrical and Electronics Engineering, Idhaya Engineering College For Women, Chinnasalem. Conducted 30 hours Add-on course on "The Arduino Platform and C Programing" from 22.02.2021 to 26.02.2021. Mr. S. Silambarasan, Assistant Professor /EEE were the resource person. The students from second year EEE&amp;ECE actively Participated in this course. The course ended with the outcome of the students will be able to do the composition of the Arduino development board-Describe what it means to program the board's firmware-Read board schematics-Install Arduino IDE-Describe what "shields" are and how they are used-Specify the role of libraries in the use of shields-Compile and run a program-Name C Variables and Types-Name common C operators-Use conditionals and loops-Explain functions, their definition and invocation- Explain the implications of global variables-Undertake the Arduino build process-Describe the role of the tools behind the IDE-Describe how to invoke functions in classes-Explain the structure of an Arduino sketch-Access the pins of the Arduino-Differentiate between digital and analog pin-Debug embedded software-Explain the importance of controllability and observability in the debugging process-Describe common debugging architectures for embedded systems-Explain how the UART Serial communication protocol works-Describe how the Arduino Serial library performs serial communication.</p>			

Course Co-ordinator

HOD

Principal

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Ref: IECW/ECE/ML/2021

Date: 02.03.2021

## Add-on Course

Name of the Course: **The Arduino Platform and C Programing**

Academic Year: 2020-21

Course Duration: **22.02.2021-26.02.2021 (30 hours)**

Year/Dept.: II/ECE

## Mark List

S. No	Roll No.	Name	Marks	50
1.	621119106001	ABARNA A	48	
2.	621119106002	AZHAGUNILA S	37	
3.	621119106003	BANUMATHI N	39	
4.	621119106004	BHAVANI E	42	
5.	621119106007	GAYATHRI G	39	
6.	621119106008	ISHWARIYA. P	44	
7.	621119106009	JANANI G	40	
8.	621119106010	JENIFER A	43	
9.	621119106011	JENO JENCY P	39	
10.	621119106012	JOTHIKA C	44	
11.	621119106013	KALKI P	46	
12.	621119106014	KALPANA T	43	
13.	621119106015	KAYATHRI V	40	
14.	621119106016	MADHUMITHA A	38	
15.	621119106017	MUGILA R	45	
16.	621119106018	RAGHAVI R	47	
17.	621119106019	RESHMA S	40	
18.	621119106021	SHALINI G	41	
19.	621119106022	SHREEIN FATHIMA	42	
20.	621119106023	SIDHARTHINI K S	43	
21.	621119106024	SUBITHA K	48	

Course Coordinator

HOD

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Date: 02.03.2021

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Name of the Course: **The Arduino Platform and C Programing**

Academic Year: 2020-21

Course Duration: **22.02.2021-26.02.2021 (30 hours)**

Year/Dept.: II/EEE

## Mark List

S. No	Roll No.	Name	Marks
1.	6211191050	ANANDHI R	38
2.	6211191050	CHARUMATHI K	37
3.	6211191050	JANANI V	39
4.	6211191050	KAMALI S	42
5.	6211191050	KAVIYA S	39
6.	6211191050	MANISHA V	44
7.	6211191050	NANDHINI K	40
8.	6211191050	PAVITHRA G	43

Course Co-ordinator

HOD

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 Permanently Affiliated Programmes – CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

### CERTIFICATE OF COMPLETION

This is to Certify that.....Jeno Jency . P.....  
 studying .....II -ECE..... has successfully completed.....30 hours..... Add-on Course  
 on.....The Arduino Platform and C Programming..... conducted by the Department of  
 .....EEE..... from 22.02.2021 to 26.02.2021. In the academic year 2020-2021....

*Aneel*  
**Course co-ordinator**

*[Signature]*  
**HOD**

*[Signature]*  
**Principal**  
 DR. R. GURUMANI, M.E., PH.D., M.B.A., MISTE., FIE.,  
 PRINCIPAL  
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### CERTIFICATE OF COMPLETION

This is to Certify that.....Sidharthini K.....  
studying .....II - ECE..... has successfully completed.....30 hours..... Add-on Course  
on.....The Arduino Platform and C Programming..... conducted by the Department of  
.....EEE..... from ..22.02.2021.. to ..26.02.2021.. In the academic year ..2020.....-2021.....

Aneel  
Course co-ordinator

[Signature]  
HOD

[Signature]  
Principal  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE, FIE  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



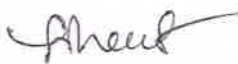
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Permanently Affiliated Programmes – CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.


### CERTIFICATE OF COMPLETION

This is to Certify that.....Charumathi . K.....  
studying II - EEE..... has successfully completed 30 hours..... Add-on Course  
on The Arduino Platform and C Programming..... conducted by the Department of  
EEE..... from 22.02.2021 to 26.02.2021 In the academic year 2020 - 2021..

  
Course co-ordinator

  
HOD

  
DR. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE., FIIT  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT

  
Principal



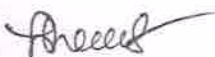
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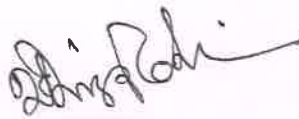
## Chinnasalem – 606201, Kallakurichi Dt.


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Permanently Affiliated Programmes – CSE & ECE, 2(f) status of UGC & An ISO 9001:2015 Certified Institution.

### CERTIFICATE OF COMPLETION

This is to Certify that.....Manisha V.....  
studying .....II - EEE..... has successfully completed.....30 hours..... Add-on Course  
on.....The Arduino Platform and C Programming..... conducted by the Department of  
.....EEE..... from 22.02.2021 to 26.02.2021. In the academic year 2020 - 2021.

  
Course co-ordinator

  
HOD

  
Principal  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE., F.I.E.  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN,  
CHINNASALEM-606 201, KALLAKURICHI DT.





# **IDHAYA ENGINEERING COLLEGE FOR WOMEN**

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

2(f) Status of UGC, An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

---

## **ARDUINO PROGRAMMING AND INTERFACING**



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW /ACA/ STU/ CIR / 2020

Date: 14.10.2020

## CIRCULAR

As per the Regulation-2017 of Anna University regarding Value added course, I hereby direct all HOD's to prepare proposals for conducting the courses to the final year students for the academic year 2020-21. The details of syllabus for the value added courses, resource person and the resources required for conducting the courses should be furnished.

*Ramani*  
PRINCIPAL

### Copy To:

1. Secretary for her kind information.
2. Vice Principal.
3. HOD's.
4. File.

*Ramani*  
**Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.I.S.T.E., F.I.E.**  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



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Phone: 04151-258325, 258326

Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref: IECW/EEE/RL/2020

Date: 02.11.2020

## Requisition Letter

To:

The principal,  
Idhaya Engineering College for Women,  
Chinnasalem – 606201.

Through:

Head of the Department,  
Department of Electrical and Electronics Engineering.

Sub: Request for organising a Value added course.

Dear Sir,

I, Mr. C. Kumar, Assistant Professor in the Department of Electrical and Electronics Engineering, would like to conduct a Value added course on "EVA036 & EVA003 - Arduino Programming and Interfacing" from 18.12.2020 to 23.12.2020 for final year EEE students. In association with Caliber Embedded Technology, Salem. Mr. R.Praveen, Sr.Embedded Engineer will be the trainer for this course. In this regard, I request you to give permission for the course.

Thanking you sir.

Yours Sincerely

*Handwritten signature of Dr. R. Gurumathi*

DR. R. GURUMATHI, Principal

PRINCIPAL

IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT

*Handwritten signature of Mr. C. Kumar*

(Mr. C. Kumar)

VALUE ADDED COURSE

SYLLABUS

EVA036

ARDUINO PROGRAMMING AND INTERFACING

L T P C  
0 0 2 1

**OBJECTIVES:**

- to study and understand about basics of arduino board types, and program structure.
- to write and compile arduino programs.
- to study arduino sensors and interfacing circuits.
- to design and develop real time applications using arduino.

**LIST OF EXPERIMENTS**

1. Study of basic arduino board types, sensors and interfacing circuits.
2. To write arduino Programming and compiling
3. Write a program to interface humidity sensor and Temperature sensor.
4. Write a program to interface PIR sensor and ultrasonic sensor.
5. Develop arduino program for DC motor control.
6. Develop arduino program for stepper motor control.
7. Develop arduino program for servo motor control.
8. Design of automatic water level indicating system using arduino.
9. Design of Digital tachometer using arduino.
10. Design of automatic water level indicating system using arduino.

**TOTAL : 15 PERIODS**

**OUTCOMES:**

upon completion of the course, the students will be able to

- Explain the basics of Arduino and its types.
- Apply the concepts and write programs.
- Analyze different sensors and interfacing circuits.
- Design and develop projects using arduino.



**R. THIKEYAN, AP / EEE,  
HEAD OF THE DEPARTMENT**



**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M. ISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.**

**Signature of the Principal**

**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M. ISTE., F.I.E.,**

**IDHAYA ENGINEERING COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.**

## A. SYLLABUS

**EVA003**

**ARDUINO PROGRAMMING**

L T P C  
1 0 0 1

### Course Objectives:

This course is intended to make you comfortable in getting started with Arduino.

- To take students from beginner to basic functional knowledge of the Arduino microcontroller
- Write and upload simple code for the Arduino
- Integrate a variety of physical sensors inputs
- Integrate a variety of physical outputs
- Design and develop a real time projects using Arduino

### Prerequisites:

- Knowledge of C language
- Knowledge in other programming language especially the OOP is an added advantage.
- A basic understanding of microcontroller and electronics is also expected.

### UNIT I – Getting Started with Arduino

Introduction to Arduino, Pin configuration and architecture, Device and platform features, Concepts of serial and analog ports, Familiarizing with Arduino Interfacing Board, Introduction to Embedded C++

### UNIT II – Arduino I/O Functions

Arduino types, Variables and constants, Operators, Pins Configured as INPUT, Pins Configured as OUTPUT, pinMode() function, digitalWrite() function, digitalWrite() function

### UNIT III – Arduino Sensors & Arduino Secondary Integrations

Temperature Sensor, Arduino Water Detector / Sensor, Arduino PIR Sensor, Arduino Ultrasonic Sensor, Types of Relay, Controlling Electrical appliances with electromagnetic relays, Controlling servo motors to Arduino.

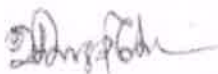
### UNIT IV – Arduino Communications

Serial Communication Modules, Types of Serial Communications, Arduino UART, GSM/GPRS Communication

### UNIT V – Arduino in real time applications

Library management system, Home automation, Intelligent Automatic Irrigation System, Fire Alarm system, Intelligent Safety system.

TOTAL PERIODS : 15  
CREDITS : 1



**V.KARTHIKEYAN, AP / EEE,  
HEAD OF THE DEPARTMENT**



**Dr.R.GURUMANI, M.E., Ph.D., M.B.A., MISTE, FIE**  
PRINCIPAL

**IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT**

**Signature of the Principal**

**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE, FIE**  
PRINCIPAL

**IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT**



**CENTRE FOR ACADEMIC COURSES**  
 ANNA UNIVERSITY  
 CHENNAI - 600 025

Off: 22357077 / 173

22357074

Fax / Dir : 22352273



Dr. S.HOSIMIN THILAGAR  
 DIRECTOR  
 Letter No:2473/AU/EVA/CAC/2020

12.11.2020

To  
 The Controller of Examinations  
 Anna University  
 Chennai - 25.

*To  
 P.H.A./AU  
 copy to Exam Cell  
 R  
 12/11/20*

Sir,

Sub A U - CAC - Affiliate Institutions - Value Added Courses - Reg

Ref (i) Letter No. IECW/ADM/ACA/VAC/2020, dated: 20.10.2020.  
 (ii) Mail received from the Principal, Idhaya Engineering College for Women, dated. 11.11.2020.

With reference to the letter cited above, course code is allotted for each of the Value Added Courses as mentioned below:

S.No	Code Allotted	Title	LTPC
1	EVA003	Arduino Programming	1 0 0 1
2	EVA036	Arduino Programming and Interfacing	0 0 2 1

This is for your kind information and necessary action at your end.

Yours faithfully

*[Signature]*  
 12/11/2020

DIRECTOR

Copy to:

- 1 The Chairperson, Faculty of Electrical Engineering, Anna University, Chennai - 25.
- 2 The Principal Idhaya Engineering College for Women, Chinnasalem - 606 201 Kallakurichi District
- 3 The Stock File

*[Signature]*  
**Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**  
**PRINCIPAL**  
**IDHAYA ENGG. COLLEGE FOR WOMEN**  
**CHINNASALEM-606 201. KALLAKURICHI DT**



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

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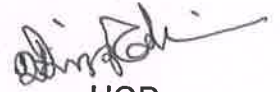
Email ID: idhaya@iecw.edu.in

Ref: IECW /ADM/Dept.-EEE/ CIR / 2020

Date: 09.11.2020

## CIRCULAR

As per the Regulation-2017 of Anna University regarding Value added course, it is decided to conduct "EVA036 & EVA003 - Arduino Programming and Interfacing" for final year EEE students from 18.12.2020 to 23.12.2020 for the academic year 2020-2021, in association with Caliber Embedded Technology, Salem. Mr. R.Praveen, Sr.Embedded Engineer will be the trainer for this course. Mr.C.Kumar, Assistant Professor/EEE will coordinate this course. Students can enroll their name for the course with Mr.C.Kumar.


  
HOD

### Copy To:

1. Secretary for her kind information.
2. Principal.
3. Vice Principal
4. To circulate among the department staff members.
5. File.

### CC To:

To read in final year EEE class.

  
**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**  
**PRINCIPAL**  
**IDHAYA ENGG. COLLEGE FOR WOMEN**  
**CHINNASALEM-606 201, KALLAKURICHI DT**



Idhaya Engineering College for Women  
Chinnasalem – 606201  
(Approved by AICTE, New Delhi & Affiliated  
to Anna University, Chennai)

Value added Course  
On

# "Arduino Programming and Interfacing"

18 th December- 23 rd December -2020

*Mr. R.Praveen, Sr.Embedded Engineer  
Caliber Embedded Technology, Salem*

*Dr.R.GURUMANI*, M.E., Ph.D., M.B.A., M.ISTE., F.I.E..  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201. KALLAKURICHI DT

**PARTICIPANTS: Final year EEE**

**Venue: LH 03-IECW**





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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref:IECW/EEE /SR/2020

Date: 16.12.2020

Value Added Course

Name of the Course: **EVA036 & EVA003 - ARDUINO PROGRAMMING & INTERFACING**

Sem: ODD

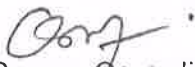
Year/Dept.: IV / EEE

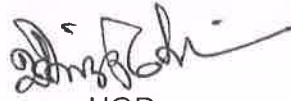
Academic Year: 2020-2021

Course Duration: 18.12.2020 – 23.12.2020 (30 hours)

## Registered Students

S. No	Roll No.	Name
1.	621117105002	BHARANI.P
2.	621117105003	CELCIYA.L
3.	621117105004	GAYATHRI.V
4.	621117105005	JEEVA.Y
5.	621117105006	KALVI.P
6.	621117105007	KOKILA.S
7.	621117105008	POONGUZHALI.P
8.	621117105010	PRIYADHARSHNIALLWIN
9.	621117105011	RAJESHWARI.R
10.	621117105012	SANTHINI.A
11.	621117105013	SHAKILAAANANTHABABY.
12.	621117105014	SUGANYA.P
13.	621117105015	SUVITHA.S
14.	621117105016	UDHAYANILA.V
15.	621117105017	VEERAMMAL.P

  
Course Co-ordinator

  
HOD

  
PRINCIPAL

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL

IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DISTRICT



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref:IECW/EEE /SAL/2020

Date:18.12.2020

## Value Added Course

Name of the Course: EVA036 & EVA003 - ARDUINO PROGRAMMING & INTERFACING

Sem: ODD

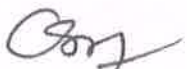
Year/Dept: IV / EEE


Academic Year: 2020-2021

Course Duration: 18.12.2020 – 23.12.2020 (30 hours)


## Students Attendance List

S. No	Roll No.	Name	18.12.2020	19.12.2020	21.12.2020	22.12.2020	23.12.2020
1.	6211171050	BHARANI.P	/	/	/	/	/
2.	6211171050	CELCIYA.L	/	/	/	/	/
3.	6211171050	GAYATHRI.V	/	/	/	/	/
4.	6211171050	JEEVA.Y	/	/	/	/	/
5.	6211171050	KALVI.P	/	/	/	/	/
6.	6211171050	KOKILA.S	/	/	/	/	/
7.	6211171050	POONGUZHALI.P	/	/	/	/	/
8.	6211171050	PRIYADHARSHNIALWIN.L	/	/	/	/	/
9.	6211171050	RAJESHWARI.R	/	/	/	/	/
10.	6211171050	SANTHINI.A	/	/	/	/	/
11.	6211171050	SHAKILANANTHAB	/	/	/	/	/
12.	6211171050	SUGANYA.P	/	/	/	/	/
13.	6211171050	SUVITHA.S	/	/	/	/	/
14.	6211171050	UDHAYANILA.V	/	/	/	/	/
15.	6211171050	VEERAMMAL.P	/	/	/	/	/

  
Course Coordinator

  
HOD

  
PRINCIPAL

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.L.  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT



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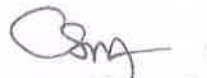
Email ID: idhaya@iecw.edu.in


Ref: IECW/EEE/ER/2021


Date: 21.01.2021

## Event Report

Name of Activity: Value Added Course: <b>Arduino Programming and Interfacing</b>			
Organized by: Electrical and Electronics Engineering			
Date: 18.12.2020-23.12.2020		Total Participants: 15	
Resource Person:			
S. No.	Name of the Resource Persons	Designation	Institution & Place
1.	Mr. R.Praveen	Sr.Embedded Engineer.	Caliber Embedded Technology, Salem.
<p>For the benefits of student's The Department of Electrical and Electronics Engineering, Idhaya Engineering College for Women, Chinnasalem, conducted Value Added Course on "Arduino Programming and Interfacing" from 18.12.2020 to 23.12.2020 Mr. R.Praveen, Sr.Embedded Engineer, Caliber Embedded Technology, Salem. Was the resource person. The students from final year EEE actively attended the course. The training session includes the theoretical explanation of the Arduino Programming &amp;Interfacing with programs, drive installation, Interface sensor and Serial communication with Arduino Programming &amp;Interfacing. Total strength of 15 students was formed into 03 batches such as seven students in a batch. Demonstration on Arduino Programming &amp;Interfacing software and hands-on work with arduino kit and software were given to the Students which enable them to have an active participation in the programme and help them to gain a thorough knowledge. And online test was conducted to the students on 08.01.2021 and 12.01.2021 marks send to the university.</p>			

  
Course Co-ordinator

  
HOD

  
Principal  
**Dr.R.GURURAJAN**, Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT



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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref:IECW/EEE /ML/2020

Date: 21.01.2021

Value Added Course

Name of the Course: **EVA036 & EVA003 - ARDUINO PROGRAMMING & INTERFACING**

Sem: ODD

Year/Dept.: IV / EEE

Academic Year: 2020-2021

Course Duration: 18.12.2020 – 23.12.2020 (30 hours)

## Mark List

S. No	Roll No.	Name	Marks /100
1.	6211171050	BHARANI.P	93
2.	6211171050	CELCIYA.L	94
3.	6211171050	GAYATHRI.V	95
4.	6211171050	JEEVA.Y	91
5.	6211171050	KALVI.P	85
6.	6211171050	KOKILA.S	92
7.	6211171050	POONGUZHALI.P	93
8.	6211171050	PRIYADHARSHNIALL	95
9.	6211171050	RAJESHWARI.R	96
10.	6211171050	SANTHINI.A	94
11.	6211171050	SHAKILAA NANTHAB	93
12.	6211171050	SUGANYA.P	95
13.	6211171050	SUVITHA.S	91
14.	6211171050	UDHAYANILA.V	94
15.	6211171050	VEERAMMAL.P	95

Course Co-ordinator

HOD

PRINCIPAL

**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**  
**PRINCIPAL**  
**IDHAYA ENGG. COLLEGE FOR WOMEN**  
**CHINNASALEM-606 201, KALLAKURICHI DT.**

**ANNA UNIVERSITY :: CHENNAI - 600025.**  
**OFFICE OF THE CONTROLLER OF EXAMINATIONS**  
**Provisional Results of Nov. / Dec. Examination, 2020.**

Page 4/4

Inst.Code/Name : 6211 - IDHAYA ENGINEERING COLLEGE FOR WOMEN

Semester No. : 07

DATE OF PUBLICATION :DD-MM-YYYY

Branch : 105-B.E. Electrical and Electronics Engineering

Reg. Number	Subject Code ->	EE8010	EE8701	EE8702	EE8703	EI8075	EVA003	OCS752
Reg. Number	Stud. Name	Grade	Grade	Grade	Grade	Grade	Grade	Grade
621117105002	BHARANI P	U	U	U	U	U	O	U
621117105003	CELCIYA L	B		U	U	B	O	
621117105004	GAYATHRI V	B	U	U	B	B	O	B
621117105005	JEEVA Y	UA	U	U	B	B	O	U
621117105006	KALVI P	U	U	U	B	U	A+	U
621117105007	KOKILA S	U	U	U	U	U	O	U
621117105008	POONGUZHALI P	B	U	U	U	U	O	U
621117105010	PRIYADHARSHNI ALLWIN L	U	U	U	U	U	O	U
621117105011	RAJESHWARI R	B	U	B	B+	B+	O	B
621117105012	SANTHINI A	U	U	U	B+	B+	O	B
621117105013	SHAKILA ANANTHA BABY N		U	U	U	B	O	U
621117105014	SUGANYA P	B	U	U	B	B	O	U
621117105015	SUVITHA S	U	U	U	B	B	A+	U
621117105016	UDHAYANILA V	B	U	B	U	B+	O	U
621117105017	VEERAMMAL P	UA	U	U	U	U	O	U

*R. Gurumani*  
**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**  
**PRINCIPAL**  
**IDHAYA ENGG. COLLEGE FOR WOMEN**  
**CHINNASALEM-606 201, KALLAKURICHI DT**

W - Withdrawal I - Inadequate Attendance

WH1 - Withheld for Suspected Malpractice WH(others) - Withheld for want of Clarification, approval, etc.



# **IDHAYA ENGINEERING COLLEGE FOR WOMEN**

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Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

---

## **IOT USING ARDUINO**



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

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A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW /ACA/ STU/ CIR / 2020

Date: 14.10.2020

## CIRCULAR

As per the Regulation-2017 of Anna University regarding Value added course, I hereby direct all HOD's to prepare proposals for conducting the courses to the final year students for the academic year 2020-21. The details of syllabus for the value added courses, resource person and the resources required for conducting the courses should be furnished.

*[Signature]*  
PRINCIPAL

### Copy To:

1. Secretary for her kind information.
2. Vice Principal.
3. HOD's.
4. File.

*[Signature]*  
**Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.**  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

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Phone: 04151-258325; 258326

Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref: IECW/ECE/RL/2020

Date: 02.11.2020

## Requisition Letter

To:

The principal,  
Idhaya Engineering College for Women,  
Chinnasalem – 606201.

Through:

Head of the Department,  
Department Of Electronics and Communication Engineering.

Sub: Request for organising a Value added course.

Dear Sir,

I, Dr. Amutha Jeevakumari S A, Professor in the Department of Electronics and Communication Engineering, would like to conduct a Value added course on "IVA067-IOT Using Arduino" from 18.12.2020 to 23.12.2020 for final year CSE,ECE &IT students. In association with Caliber Embedded Technology, Salem. Mr.G.Saravanan, Sr.Embedded Engineer will be the trainer for this course. In this regard, I request you to give permission for the course.

Thanking you sir.

Yours Sincerely

  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., MISTE., P.H.D.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT

  
(Dr. Amutha Jeevakumari S A)



**Objectives:**

- To expose student and gain knowledge about Arduino technology with IOT
- To Program and construct applications using Arduino using a number of different sensors and IOT

**Unit – I Introduction to Arduino**

Embedded processing portfolio, Architecture and hardware organization of Arduino, Configuring GPIO and Clock systems, Real time applications using GPIO configuration, LCD interfacing, Technical explanation ADC, Configuring ADC, Real time applications using Sensors

**Unit – II Interfacing with Zigbee**

Bluetooth Interfacing, Android mobile based device control ,GSM interfacing and send SMS, Real time Application Development with GSM ,Zigbee Interfacing, Data transmission using zigbee, Real time applications interfacing with sensors and Zigbee

**Unit – III Real Time applications**

DC Motor Interfacing, H-bridge concept and design and ultrasonic interfacing, Clockwise and anticlockwise control, Real time applications interfacing with robotic vehicle model, Real time applications interfacing with sensors and Robot

**Unit – IV Li-Fi with Ardino**

Introduction, Li-Fi based Data communication, Interfacing Li-Fi with Arduino, Application Development with Li-Fi.

**Unit – V IOT –Configuration & Integration**

Introduction to IoT & Scope of IoT, Web page creation, Data transmission from sensors, Configuration webpage ,Sensor data monitoring , Wireless Interfacing, Android mobile based device control, GSM interfacing and send SMS, Real time Application Development with GSM, Zigbee Interfacing Data transmission using zigbee, Real time applications interfacing with robotic vehicle.

**Outcomes:**

The students will be outfitted with hands on knowledge in IOT using ARDUINO.

Upon completion of the program, the students will be able to

C01	Understand features of the Arduino platform
C02	Application development-Integrate with Zigbee
C03	Study and execute real time applications
C04	Application development -Li-Fi with Ardino
C05	Execute coding to gather and process data on the Arduino via the cloud.

**Total Hours: 45**

*R. Guramani*  
**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**  
**PRINCIPAL**  
**IDHAYA ENGG. COLLEGE FOR WOMEN**  
**CHINNASALEM-606 201, KALLAKURICHI DT**

*R. Guramani*  
**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**  
**PRINCIPAL**  
**IDHAYA ENGG. COLLEGE FOR WOMEN**  
**CHINNASALEM-606 201, KALLAKURICHI DT**



**CENTRE FOR ACADEMIC COURSES**  
**ANNA UNIVERSITY**  
 CHENNAI - 600 026

Off: 22357077 / 73  
 22357074  
 Fax / Dir : 22352272



**Dr. S.HOSIMIN THILAGAR**  
 DIRECTOR  
 Letter No.2473/AU/VA/CAC/FICE/2020

*File / Au* .11.2020  
*copy to*  
*Exam cell*  
*HOD*  
*9/11/20*

To  
 The Controller of Examinations  
 Anna University  
 Chennai - 25

Sir,

Sub: A.U. - CAC - Affiliated Institutions - Value Added Courses - Reg.  
 Ref: (i) Letter No. IECW/ADM/ACA/VAC/2020, dated:20.10.2020  
 (ii) Mail received from the Principal, Idhaya Engineering College of Women, dated: 02.11.2020

\*\*\*\*\*

With references to the letter cited, the following Value Added Courses offered by Idhaya Engineering College for Women, Affiliated Institutions is allotted the course code as detailed below

SI. NO.	CODE ALLOTTED	TITLE	CREDITS			
			L	T	P	C
1.	IVA067	IOT using Arduino	1	0	2	2

This is for your kind information and necessary action at your end.

Yours faithfully,

*[Signature]*  
 DIRECTOR

Copy to:

- The Principal, Idhaya Engineering College for Women, Chinnasalem - 606 201, Kallakurichi District
- The Chairperson, Faculty of Information and Communication Engineering, A. U., Chennai -25.
- The Stock File.

At

*[Signature]*  
**Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.**  
 PRINCIPAL  
 IDHAYA ENGG. COLLEGE FOR WOMEN  
 CHINNASALEM-606 201, KALLAKURICHI DT



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/ECE/CIR/2020

Date: 09.11.2020

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### CIRCULAR

As per the Regulation-2017 of Anna University regarding Value added course, it is decided to conduct "IVA067-IOT Using Arduino" for final year CSE,ECE &IT students from 18.12.2020 to 23.12.2020 for the academic year 2020-2021, in association with Caliber Embedded Technology, Salem. Mr.G.Saravanan, Sr. Embedded Engineer, will be the trainer for this course. Dr. Amutha Jeevakumari S A, Professor /ECE will coordinate this course. Students can enrol their name for the course with Dr. Amutha Jeevakumari S A, Professor.

*P. A. Jeeva*  
HOD

#### Copy To:

1. Secretary for her kind information.
2. Principal
3. Vice Principal.
4. HOD (CSE & IT)
5. To circulate among the departments staff members.
6. File.

#### CC To:

To read in final year CSE,ECE&IT classes.

*R. Guramani*  
**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.**  
**PRINCIPAL**  
**IDHAYA ENGG. COLLEGE FOR WOMEN**  
**CHINNASALEM-606 201, KALLAKURICHI DT**



Idhaya Engineering College for Women  
Chinnasalem – 606201  
(Approved by AICTE, New Delhi & Affiliated  
to Anna University, Chennai)

Value added Course  
On

"IOT using Arduino"

18 th December- 23 rd December -2020

*Mr.G.Saravanan, Sr.Embedded Engineer  
Caliber Embedded Technology, Salem*

**PARTICIPANTS: Final year CSE, ECE & IT**

**Venue: LH 01-IECW**

*Principals*  
Dr.R.GURUMANI, M.E., Ph.D., M.B.A.,  
PRINCIPAL  
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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref:IECW/CSE /SR/2020

Date:15.12.2020

## Value Added Course

Name of the Course: - IVA067-IOT Using Arduino

Year/Dept: IV / CSE

Academic Year:2020-2021

Course Duration: 18.12.2020 – 23.12.2020 (30 hours)

## Registered Students

S. No	Roll No.	Name
1.	621117104001	AARTHI V
2.	621117104002	AKSHAYA K
3.	621117104003	ANISHA V
4.	621117104004	ANITHA D
5.	621117104006	ANUJAYA K
6.	621117104009	BUVANESWARI K
7.	621117104010	DAISY C
8.	621117104011	DEEPIKA M
9.	621117104013	GAYATHRI B
10.	621117104014	GOODLUCK V
11.	621117104015	GOWRI K
12.	621117104016	INDHIRA K
13.	621117104017	INDHUJA S
14.	621117104019	JANANI N
15.	621117104020	JENIFER A
16.	621117104021	JENIFER NAYAGI S
17.	621117104022	JENIFFER RANJINI A
18.	621117104023	KANIMOZHI P
19.	621117104027	MANI BHARATHI D
20.	621117104028	MATHESHWARI C
21.	621117104029	MUTHULAKSHMI M
22.	621117104030	NANDHINI E
23.	621117104031	PADHMA J
24.	621117104033	PAVITHRA.D
25.	621117104034	PRABA B
26.	621117104035	PRAVEENA P
27.	621117104038	PRIYA C
28.	621117104039	PRIYA R

*R. Guramani*  
Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.it.

PRINCIPAL

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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

29.	621117104040	PRIYADHARSHINI.A
30.	621117104041	RAMYA P
31.	621117104042	RISWANA S
32.	621117104043	ROMILA R
33.	621117104044	SABITHRA K
34.	621117104046	SARAL JAYARANI A
35.	621117104048	SARULATHA K
36.	621117104050	SHALINI S
37.	621117104052	SOWBARNIKA A
38.	621117104053	SOWNDHARYA V
39.	621117104055	TAMILSELVI P
40.	621117104056	UDHAYANILA U
41.	621117104058	VASANTHAPRIYA V
42.	621117104059	VIJAYALAKSHMI S P
43.	621117104060	VINTHIYA M

*J.A. Juse*  
Course Co-ordinator

*J.A. Juse*  
HOD

*Juse*  
PRINCIPAL

*Juse*  
**Dr. R. GURUMANI, M.E., Ph.D., M.B.A.**

**PRINCIPAL**

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CHINNASALEM-606 201, KALLAKURICHI DT.**



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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref:IECW/ECE /SR/2020

Date:15.12.2020

## Value Added Course

Name of the Course: - IVA067-IOT Using Arduino

Year/Dept: IV / ECE

Academic Year: 2020-2021

Course Duration: 18.12.2020 – 23.12.2020 (30 hours)

## Registered Students

S. No	Roll No.	Name
1.	621117106002	ALAMELU A
2.	621117106003	AMALA S
3.	621117106004	ANITHA P
4.	621117106005	ANJUGAM S
5.	621117106008	BHARATHI MEENA K
6.	621117106009	BHARATHI T
7.	621117106010	DEVIPRIYA G
8.	621117106013	GOMATHI P
9.	621117106014	HARANISHWARI R
10.	621117106016	KAVIYA V
11.	621117106017	KOWSALYA K
12.	621117106018	MADHURASREE G
13.	621117106019	MEENA K
14.	621117106020	NANDHINI A
15.	621117106022	PUNITHA D
16.	621117106023	RANJITHA R
17.	621117106024	RASIYA P
18.	621117106025	SELVABHARATHI T
19.	621117106026	SINDHUBALA B
20.	621117106027	SNEKA A
21.	621117106028	SRIMATHI M
22.	621117106029	SUBHASHINI S
23.	621117106030	SUBASRI S
24.	621117106031	SUGANTHI C
25.	621117106032	SUMITHRA M

Course Coordinator

HOD

PRINCIPAL

Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.ISI E.,  
PRINCIPAL

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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref:IECW/IT /SR/2020

Date:15.12.2020

## Value Added Course

Name of the Course: - IVA067-IOT Using Arduino

Year/Dept: IV / IT

Academic Year: 2020-2021

Course Duration: 18.12.2020 – 23.12.2020 (30 hours)

## Registered Students

S. No	Roll No.	Name
1.	621117205002	ACCELIA
2.	621117205003	AKSHAYA KA
3.	621117205004	ANANTHI S
4.	621117205005	ANUPRIYA C
5.	621117205006	ASHAMARY M
6.	621117205008	BHUVANESWARI B
7.	621117205009	CHANDHARALEKA J
8.	621117205010	HEMALATHA S
9.	621117205011	KANCHANA S
10.	621117205012	MANJULA S
11.	621117205013	MARY VALENTINA P
12.	621117205014	NANDHINI A
13.	621117205015	PRAVEENA V
14.	621117205017	PRIYADARSHINI D
15.	621117205018	PRIYANKA P
16.	621117205020	SHAHIKA PARWEEN.M
17.	621117205022	VAITHEESHWARI S

*J. A. Jeeva*  
Course Co-ordinator

*J. A. Jeeva*  
HOD

*Ramani*  
PRINCIPAL

*Ramani*  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.

PRINCIPAL

IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT





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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref:IECW/CSE /SAL/2020

Date:18.12.2020

## Value Added Course

Name of the Course: - IVA067-IOT Using Arduino

Year/Dept: IV / CSE

Academic Year: 2020-2021

Course Duration: 18.12.2020 – 23.12.2020 (30 hours)

## Students Attendance List

S. No	Roll No.	Name	18.12.2020	19.12.2020	21.12.2020	22.12.2020	23.12.2020
1.	6211171040	AARTHI V	/	/	/	/	/
2.	6211171040	AKSHAYA K	/	/	/	/	/
3.	6211171040	ANISHA V	/	/	/	/	/
4.	6211171040	ANITHA D	/	/	/	/	/
5.	6211171040	ANUJAYA K	/	/	/	/	/
6.	6211171040	BUVANESWARI K	/	/	/	/	/
7.	6211171040	DAISY C	/	/	/	/	/
8.	6211171040	DEEPIKA M	/	/	/	/	/
9.	6211171040	GAYATHRI B	/	/	/	/	/
10.	6211171040	GOODLUCK V	/	/	/	/	/
11.	6211171040	GOWRI K	/	/	/	/	/
12.	6211171040	INDHIRA K	/	/	/	/	/
13.	6211171040	INDHUJA S	a	/	/	/	/
14.	6211171040	JANANI N	/	/	/	/	/
15.	6211171040	JENIFER A	/	/	/	/	/
16.	6211171040	JENIFER NAYAGI S	/	/	/	/	/
17.	6211171040	JENIFFER RANJINI A	/	/	/	/	/
18.	6211171040	KANIMOZHI P	/	/	a	/	/
19.	6211171040	MANI BHARATHI D	/	/	/	/	/
20.	6211171040	MATHESHWARI C	/	/	/	/	/
21.	6211171040	MUTHULAKSHMI M	/	/	/	/	/
22.	6211171040	NANDHINI E	/	/	/	/	/
23.	6211171040	PADHMA J	/	/	/	/	/
24.	6211171040	PAVITHRA.D	/	a	/	/	/
25.	6211171040	PRABA B	/	/	/	/	/
26.	6211171040	PRAVEENA P	/	/	/	/	/
27.	6211171040	PRIYA C	/	/	/	/	/
28.	6211171040	PRIYA R	/	/	/	/	/
29.	6211171040	PRIYADHARSHINI.A	/	/	/	/	/
30.	6211171040	RAMYA P	/	/	/	/	a
31.	6211171040	RISWANA S	/	/	/	/	/
32.	6211171040	ROMILA R	/	/	/	/	/
33.	6211171040	SABITHRA K	/	/	/	/	/
34.	6211171040	SARAL JAYARANI A	/	/	/	/	/

Dr.R.GURUMANI, M.E., P.D., M.B.A., MISTE, FIE,  
PRINCIPAL

IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



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35.	6211171040	SARULATHA K	/	/	/	/	/
36.	6211171040	SHALINI S	/	/	/	/	/
37.	6211171040	SOWBARNIKA A	a	/	/	/	/
38.	6211171040	SOWNDHARYA V	/	/	/	/	/
39.	6211171040	TAMILSELVI P	/	/	/	/	/
40.	6211171040	UDHAYANILA U	/	/	/	/	/
41.	6211171040	VASANTHAPRIYA V	/	/	/	a	/
42.	6211171040	VIJAYALAKSHMI S P	/	/	/	/	/
43.	6211171040	VINTHIYA M	/	/	/	/	/

*B. A. Jeyaraj*  
Course Co-ordinator

*P. Suresh*  
HOD

*R. Mani*  
PRINCIPAL

*R. Mani*  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M. ISTE., F.I.E.,  
PRINCIPAL  
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Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref:IECW/ECE /SAL/2020

Date:18.12.2020

## Value Added Course

Name of the Course: - IVA067-IOT Using Arduino

Year/Dept: IV / ECE

Academic Year: 2020-2021

Course Duration: 18.12.2020 – 23.12.2020 (30 hours)

## Students Attendance List

S. No	Roll No.	Name	18.12.2020	19.12.2020	21.12.2020	22.12.2020	23.12.2020
1.	6211171060	ALAMELU A	/	/	/	/	/
2.	6211171060	AMALA S	/	/	/	/	/
3.	6211171060	ANITHA P	/	/	/	/	/
4.	6211171060	ANJUGAM S	/	/	/	/	/
5.	6211171060	BHARATHI MEENA K	/	a	/	/	/
6.	6211171060	BHARATHI T	/	/	/	/	/
7.	6211171060	DEVIPRIYA G	/	/	/	/	/
8.	6211171060	GOMATHI P	/	/	/	/	/
9.	6211171060	HARANISHWARI R	/	/	/	/	/
10.	6211171060	KAVIYA V	/	/	/	/	/
11.	6211171060	KOWSALYA K	/	/	/	/	/
12.	6211171060	MADHURASREE G	/	/	/	/	/
13.	6211171060	MEENA K	/	/	/	/	/
14.	6211171060	NANDHINI A	/	/	/	/	/
15.	6211171060	PUNITHA D	/	/	/	/	/
16.	6211171060	RANJITHA R	/	/	/	/	a
17.	6211171060	RASIYA P	/	/	/	/	/
18.	6211171060	SELVABHARATHI T	a	/	/	/	/
19.	6211171060	SINDHUBALA B	/	/	/	/	/
20.	6211171060	SNEKA A	/	/	/	/	/
21.	6211171060	SRIMATHI M	/	/	/	/	/
22.	6211171060	SUBHASHINI S	/	/	/	/	/
23.	6211171060	SUBASRI S	/	/	/	/	/
24.	6211171060	SUGANTHI C	/	/	/	/	/
25.	6211171060	SUMITHRA M	/	/	/	/	/

Course Co-ordinator

HOD

PRINCIPAL

Dr.R.GURUMANI,M.E.,Ph.D.,M.B.A.,M.ISTE.,F.I.E.,

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IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

2(f) Status of UGC, An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref: IECW/IT /SAL/2020

Date: 18.12.2020

## Value Added Course

Name of the Course: - IVA067-IOT Using Arduino

Year/Dept: IV / IT

Academic Year: 2020-2021

Course Duration: 18.12.2020 – 23.12.2020 (30 hours)

## Students Attendance List

S. No	Roll No.	Name	18.12.2020	19.12.2020	21.12.2020	22.12.2020	23.12.2020
1.	6211172050	ACCELIA	/	/	/	/	/
2.	6211172050	AKSHAYA KA	/	/	/	/	/
3.	6211172050	ANANTHI S	/	/	/	/	/
4.	6211172050	ANUPRIYA C	/	/	/	/	/
5.	6211172050	ASHAMARY M	/	/	/	a	/
6.	6211172050	BHUVANESWARI B	/	/	/	/	/
7.	6211172050	CHANDHARALEKA J	/	/	/	/	/
8.	6211172050	HEMALATHA S	/	/	/	/	/
9.	6211172050	KANCHANA S	/	/	/	/	/
10.	6211172050	MANJULA S	/	/	/	/	/
11.	6211172050	MARY VALENTINA P	/	/	/	/	/
12.	6211172050	NANDHINI A	/	/	/	/	/
13.	6211172050	PRAVEENA V	/	/	/	/	/
14.	6211172050	PRIYADARSHINI D	a	/	/	/	/
15.	6211172050	PRIYANKA P	/	/	/	/	/
16.	6211172050	SHAHIKA	/	/	/	/	/
17.	6211172050	VAITHEESHWARI S	/	/	/	/	/

*S. Suresh*  
Course Co-ordinator

*P. Suresh*  
HOD

*R. Mani*  
PRINCIPAL

*R. Mani*  
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Phone: 04151-258325, 258326

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Email ID: idhaya@iecw.edu.in

Ref: IECW/CSE,ECE &IT/ER/2021

Date: 21.01.2021

## Event Report

Name of Activity: Add-on Course: <b>IVA067/IOT Using Arduino</b>			
Organized by: <b>CSE,ECE &amp;IT</b>			
Date: 18.12.2020-23.12.2020		Total Participants: 85	
Resource Person: Details			
S. No.	Name of the Resource Persons	Designation	Institution & Place
1	Mr.G.Saravanan	Sr.Embedded Engineer.	Caliber Embedded Technology, Salem.
<p>For the benefits of student's The Department of CSE,ECE &amp;IT, Idhaya Engineering College for Women, Chinnasalem, conducted Value Added Course on "IOT Using Arduino" from 18.12.2020 to 23.12.2020 Mr.G.Saravanan, Sr.Embedded Engineer, Caliber Embedded Technology, Salem. Was the resource person. The students from final year CSE-43, ECE-25 &amp; IT-17 were actively attended the course. The training session includes the theoretical explanation of the IOT using Arduino with programs, drive installation, Interface sensor and Serial communication with Arduino. Total strength of 85 students was formed into 17 batches such as five students in a batch. Demonstration on Arduino software and hands-on work with arduino kit and software were given to the Students which enable them to have an active participation in the programme and help them to gain a thorough knowledge. And online test was conducted to the students on 08.01.2021 and 12.01.2021 marks send to the university.</p>			

*P. Sankar*

H.O.D

*R. Guramani*  
Principal

*R. Guramani*  
**Dr.R.GURUMANI**,M.E.,Ph.D.,M.B.A.,M.ISTE.,F.IE.,  
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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref:IECW/CSE /ML/2021

Date:18.01.2021

## Value Added Course

Name of the Course: - IVA067-IOT Using Arduino

Year/Dept: IV / CSE

Academic Year: 2020-2021

Course Duration: 18.12.2020 – 23.12.2020 (30 hours)

## Mark List

S. No	Roll No.	Name	Marks
1.	6211171040	AARTHI V	97
2.	6211171040	AKSHAYA K	88
3.	6211171040	ANISHA V	88
4.	6211171040	ANITHA D	87
5.	6211171040	ANUJAYA K	89
6.	6211171040	BUVANESWARI K	92
7.	6211171040	DAISY C	96
8.	6211171040	DEEPIKA M	88
9.	6211171040	GAYATHRI B	92
10.	6211171040	GOODLUCK V	91
11.	6211171040	GOWRI K	92
12.	6211171040	INDHIRA K	91
13.	6211171040	INDHUJA S	92
14.	6211171040	JANANI N	97
15.	6211171040	JENIFER A	92
16.	6211171040	JENIFER NAYAGI S	94
17.	6211171040	JENIFFER RANJINI A	95
18.	6211171040	KANIMOZHI P	88
19.	6211171040	MANI BHARATHI D	86
20.	6211171040	MATHESHWARI C	98
21.	6211171040	MUTHULAKSHMI M	85
22.	6211171040	NANDHINI E	88
23.	6211171040	PADHMA J	87
24.	6211171040	PAVITHRA.D	96
25.	6211171040	PRABA B	92
26.	6211171040	PRAVEENA P	86
27.	6211171040	PRIYA C	86
28.	6211171040	PRIYA R	85
29.	6211171040	PRIYADHARSHINI.A	82
30.	6211171040	RAMYA P	88
31.	6211171040	RISWANA S	92
32.	6211171040	ROMILA R	97
33.	6211171040	SABITHRA K	89
34.	6211171040	SARAL JAYARANI A	91

*Heaven*  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
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Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [idhaya@iecw.edu.in](mailto:idhaya@iecw.edu.in)

35.	6211171040	SARULATHA K	97
36.	6211171040	SHALINI S	88
37.	6211171040	SOWBARNIKA A	97
38.	6211171040	SOWNDHARYA V	87
39.	6211171040	TAMILSELVI P	85
40.	6211171040	UDHAYANILA U	84
41.	6211171040	VASANTHAPRIYA V	94
42.	6211171040	VIJAYALAKSHMI S P	83
43.	6211171040	VINTHIYA M	88

*J. Arjuna*

Course Co-ordinator

*P. Suttai*

HOD

*Mani*

PRINCIPAL

*Mani*  
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Website: www.iecw.edu.in

Email ID: idhaya@iecw.edu.in

Ref:IECW/ECE /ML/2021

Date:18.01.2021

## Value Added Course

Name of the Course: - IVA067-IOT Using Arduino

Year/Dept: IV / ECE

Academic Year: 2020-2021

Course Duration: 18.12.2020 – 23.12.2020 (30 hours)

## Mark List

S. No	Roll No.	Name	Marks 100
1.	6211171060	ALAMELU A	90
2.	6211171060	AMALA S	94
3.	6211171060	ANITHA P	100
4.	6211171060	ANJUGAM S	94
5.	6211171060	BHARATHI MEENA K	99
6.	6211171060	BHARATHI T	100
7.	6211171060	DEVIPRIYA G	99
8.	6211171060	GOMATHI P	80
9.	6211171060	HARANISHWARI R	100
10.	6211171060	KAVIYA V	99
11.	6211171060	KOWSALYA K	85
12.	6211171060	MADHURASREE G	100
13.	6211171060	MEENA K	86
14.	6211171060	NANDHINI A	100
15.	6211171060	PUNITHA D	86
16.	6211171060	RANJITHA R	90
17.	6211171060	RASIYA P	85
18.	6211171060	SELVABHARATHI T	100
19.	6211171060	SINDHUBALA B	89
20.	6211171060	SNEKA A	87
21.	6211171060	SRIMATHI M	100
22.	6211171060	SUBHASHINI S	80
23.	6211171060	SUBASRI S	89
24.	6211171060	SUGANTHI C	85
25.	6211171060	SUMITHRA M	86

Course Coordinator

HOD

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Email ID: idhaya@iecw.edu.in

Ref:IECW/IT /ML/2021

Date:18.01.2021

## Value Added Course

Name of the Course: - IVA067-IOT Using Arduino

Year/Dept: IV / IT

Academic Year: 2020-2021

Course Duration: 18.12.2020 – 23.12.2020 (30 hours)

## Mark List

S. No	Roll No.	Name	Marks /100
1.	6211172050	ACCELIA	95
2.	6211172050	AKSHAYA KA	92
3.	6211172050	ANANTHI S	93
4.	6211172050	ANUPRIYA C	97
5.	6211172050	ASHAMARY M	92
6.	6211172050	BHUVANESWARI B	94
7.	6211172050	CHANDHARALEKA J	95
8.	6211172050	HEMALATHA S	91
9.	6211172050	KANCHANA S	83
10.	6211172050	MANJULA S	94
11.	6211172050	MARY VALENTINA P	96
12.	6211172050	NANDHINI A	95
13.	6211172050	PRAVEENA V	94
14.	6211172050	PRIYADARSHINI D	92
15.	6211172050	PRIYANKA P	94
16.	6211172050	SHAHIKA	96
17.	6211172050	VAITHEESHWARI S	81

*J. A. Jeyaraj*  
Course Coordinator

*P. Senthil*  
HOD

*M. S. Mani*  
PRINCIPAL

*M. S. Mani*  
**Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**  
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**CHINNASALEM-606 201, KALLAKURICHI DT.**

**ANNA UNIVERSITY :: CHENNAI - 600025.**  
**OFFICE OF THE CONTROLLER OF EXAMINATIONS**  
**Provisional Results of Nov. / Dec. Examination, 2020.**

Page 4/5

Inst.Code/Name : 6211 - IDHAYA ENGINEERING COLLEGE FOR WOMEN

Semester No. : 07

DATE OF PUBLICATION :DD-MM-YYYY

Branch : 104-B.E. Computer Science and Engineering

Reg. Number	Subject Code - >	CS8079	CS8791	CS8792	IT8075	IVA067	MG8591	OEC754
Reg. Number	Stud. Name	Grade	Grade	Grade	Grade	Grade	Grade	Grade
621117104001	AARTHI V	B+	B	B	B	O	B	A
621117104002	AKSHAYA K	U	U	B	U	A+	U	U
621117104003	ANISHA V	U	U	B	U	A+	U	U
621117104004	ANITHA D	U	U	U	U	A+	U	U
621117104006	ANUJAYA K		U	U	B	A+	U	U
621117104009	BUVANESWARI K	U	U	U	U	A+	U	U
621117104010	DAISY C	U	U	U	U	O	B	U
621117104011	DEEPIKA M	B	U	B	U	A+	B	U
621117104013	GAYATHRI B	UA	B	U	U	O	B	U
621117104014	GOODLUCK V	U	U	U	U	A+	B	U
621117104015	GOWRI K	U	U	U	U	O		U
621117104016	INDHIRA K	U	U	U	U	O	U	U
621117104017	INDHUJA S	U	U	U	U	O	U	U
621117104019	JANANI N	B	U	B	U	O	B	U
621117104020	JENIFER A	U	U	U	U	O	U	U
621117104021	JENIFERNAYAGI S	U	B	U	U	O	U	U
621117104022	JENNIFER RANJINI A	U	B+	A	B	O	B+	B
621117104023	KANIMOZHI P	U	U	U	U	A+	U	U
621117104027	MANI BHARATHI D	U	U	U	B	A+	U	U
621117104028	MATHESHWARI C	B	B	B	B	O	B	B
621117104029	MUTHULAKSHMI M	U	U	B	U	A+	U	U
621117104030	NANDHINI E	U	U	U	U	A+	U	U
621117104031	PADHMA J	U	B	U	U	A+	B	U
621117104033	PAVITHRA D	U	B	B	B	O	B	B
621117104034	PRABA B		U	U	B	O	B	U
621117104035	PRAVEENA P	U	U	U	U	A+	U	U
621117104038	PRIYA C	U	U	U	U	A+	U	U
621117104039	PRIYA R	U	U	U	U	A+	U	U
621117104040	PRIYADHARSHINI A	U	U	B	U	A+	U	U
621117104041	RAMYA P	U	U	U	U	A+	B	U
621117104042	RISWANA S	U	B	U	U	O	B	B
621117104043	ROMILA R	U	B+	B	B	O	B	B
621117104044	SABITHRA K	U	U	U	U	A+	U	U
621117104046	SARAL JAYARANI A	U	B	B	U	O	B	U
621117104048	SARULATHA K	U	B	B	B	O	B	B+

W - Withdrawal I - Inadequate Attendance

WH1 - Withheld for Suspected Malpractice WH(others) - Withheld for want of Clarification,approval,etc.

*Mani*  
**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ITE., P.E.**  
**PRINCIPAL**  
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**CHINNASALEM-606 201, KALLAKURICHI DT.**

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OFFICE OF THE CONTROLLER OF EXAMINATIONS  
Provisional Results of Nov. / Dec. Examination, 2020.

Page 5/5

621117104050	SHALINI S	U	U	B+	B	A+	B	B
621117104052	SOWBARNIKA A	B	B	B+	B	O	B+	B+
621117104053	SOWNDHARYA V	U	U	U	U	A+	U	U
621117104055	TAMILSELVI P	B	B	U	U	A+	U	B
621117104056	UDHAYANILA U	U	U	U	B	A+	U	U
621117104058	VASANTHAPRIYA V	B	B	B	B	O	B	B+
621117104059	VIJAYALAKSHMI SP	U	U	B	B	A+	U	U
621117104060	VINTHIYA M	U	B	B	B	A+	U	U

*R. Gurumani*  
Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201. KALLAKURICHI DT

W - Withdrawal I - Inadequate Attendance

WH1 - Withheld for Suspected Malpractice WH(others) - Withheld for want of Clarification, approval, etc.

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Page 4/4

Inst.Code/Name : 6211 - IDHAYA ENGINEERING COLLEGE FOR WOMEN

Semester No. : 07

DATE OF PUBLICATION :DD-MM-YYYY

Branch : 106-B.E. Electronics and Communication Engineering

Reg. Number	Subject Code -> Stud. Name	EC8092 Grade	EC8701 Grade	EC8702 Grade	EC8751 Grade	EC8791 Grade	IVA067 Grade	OCS752 Grade
621117106002	ALAMELU A	U	U	B	U	U	A+	U
621117106003	AMALA S	U	U	U	U	U	O	U
621117106004	ANITHA P	U	U	B	B	B	O	B+
621117106005	ANJUGAM S	U	U	U	U	U	A+	U
621117106008	BHARATHI MEENA K	U	U	U	U	U	O	B
621117106009	BHARATHI T	U	U	B	U	B	O	B
621117106010	DEVIPRIYA G	B	U	U	U	U	O	U
621117106013	GOMATHI P	U	B	U	U	U	A+	U
621117106014	HARANISHWARI R	B	U	B	U	B	O	U
621117106016	KAVIYA V	U	U	B	U	U	O	B+
621117106017	KOWSALYA K	U	U	U	U	U	A+	U
621117106018	MADHURASREE G	U	B	B	B	B	O	U
621117106019	MEENA K	U	U	U	U	U	A+	U
621117106020	NANTHINI A	U	U	B	B	U	O	B
621117106022	PUNITHA D	U	U	U	U	U	A+	U
621117106023	RANJITHA R	U	U	U	U	U	A+	U
621117106024	RASIYA P	U	U	U	U	U	A+	B
621117106025	SELVA BHARATHI T	B	U	B	U	B	O	U
621117106026	SINDHUBALA B	U	U	U	U	B	A+	B
621117106027	SNEKA A	B	U	U	U	U	A+	U
621117106028	SRIMATHI M	B	U	U	B	B	O	B
621117106029	SUBASHINI S	B	U	U	U	U	A+	U
621117106030	SUBASRI S	UA	B	A	A	U	A+	B+
621117106031	SUGANTHI C	U	U	U	U	U	A+	B
621117106032	SUMITHRA M	U	U	U	B	U	A+	U

*Principals*  
**Dr.R.GURUMANI,M.E.,Ph.D.,M.B.A.,M.ISTE.,F.I.E.,**  
**PRINCIPAL**  
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**CHINNASALEM-606 201, KALLAKURICHI**

W - Withdrawal I - Inadequate Attendance

WH1 - Withheld for Suspected Malpractice WH(others) - Withheld for want of Clarification,approval,etc.

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Page 4/4

Inst.Code/Name : 6211 - IDHAYA ENGINEERING COLLEGE FOR WOMEN

Semester No. : 07

DATE OF PUBLICATION :DD-MM-YYYY

Branch : 205-B.Tech. Information Technology

Reg. Number	Subject Code ->	CS8079	CS8791	CS8792	IT8075	IVA067	MG8591	OEC754
Reg. Number	Stud. Name	Grade	Grade	Grade	Grade	Grade	Grade	Grade
621117205002	ACCELIA S	U	U	B	U	O	B	U
621117205003	AKSHAYA KA	B	B	B+	B	O	B+	B+
621117205004	ANANTHI S	U	B	B	B	O	B	B
621117205005	ANU PRIYA C	B	B	B	B	O	U	U
621117205006	ASHAMARY M	U	B	U	B	O	U	U
621117205008	BHUVANESWARI B	U	A	B	B	O	B	A
621117205009	CHANDHARALEKA J	U	U	B	U	O	B	B
621117205010	HEMALATHA S	B	B	B	B	O	B	B+
621117205011	KANCHANA S	U	U	U		A+		U
621117205012	MANJULA S	U	U	B	B	O	U	U
621117205013	MARY VALENTINA P	B	B	U	B	O	B	B
621117205014	NANDHINI A	U	U	B	B	O	B	U
621117205015	PRAVEENA V	U	U	U	U	O	U	U
621117205017	PRIYADHARSHINI D	U	U	B	U	O	U	U
621117205018	PRIYANKA P	U	U	B+	B	O	U	U
621117205020	SHAHIKA PARWEEN M	U	B	B		O	B	B
621117205022	VAITHEESHWARI S	U	U	U	B	A+	U	B

*Mani*  
**Dr.R.GURUMANI,M.E.,Ph.D.,M.B.A.,M.ISTE.,F.I.E.**  
**PRINCIPAL**  
**IDHAYA ENGG. COLLEGE FOR WOMEN**  
**CHINNASALEM-606 201, KALLAKURICHI DT**

W - Withdrawal | I - Inadequate Attendance

WH1 - Withheld for Suspected Malpractice WH(others) - Withheld for want of Clarification,approval,etc.



# **IDHAYA ENGINEERING COLLEGE FOR WOMEN**

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.

2(f) Status of UGC, An ISO 9001: 2015 Certified Institution

A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.

Phone: 04151-258325, 258326

Website: [www.iecw.edu.in](http://www.iecw.edu.in)

Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

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## **NATIONAL PROGRAMME ON TECHNOLOGY ENHANCED LEARNING**



# IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, KALLAKURICHI DISTRICT, TAMIL NADU, INDIA.

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Email ID: [indhaya@iecw.edu.in](mailto:indhaya@iecw.edu.in)

Ref:IECW/NPTEL/2020

## NPTEL online Certificate Programme

Academic Year: 2020-2021

S. No	Name of the Course	Course Duration	Name of the student
1.	Digital Image Processing	12 weeks	SELVA BHARATHI.T
2.	Cloud Computing	8 weeks	MATHESHWARI,
3.	Cloud Computing	8 weeks	SARULATHA.K

  
PRINCIPAL

Dr.R.GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.  
PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.

This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, <https://nptel.ac.in/noc/>

Roll No: NPTEL20EE75S52230154

To  
SELVA BHARATHI T  
4/808/3, RAILWAY GATE NEAR  
MELNARIYAPPANUR (POST), MELNARIYAPPANUR  
CHINNASALEM  
TAMILNADU - 606201  
PH. NO :8903229402

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate



No. of credits recommended by NPTEL:3

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



# NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

**SELVA BHARATHI T**

for successfully completing the course

## Digital Image Processing

with a consolidated score of **46** %

Online Assignments	15.84/25	Proctored Exam	30/75
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Total number of candidates certified in this course: 320

Prof. G P Raja Sekhar  
Dean, Continuing Education  
IIT Kharagpur

Sep-Dec 2020  
(12 week course)

  
Prof. Debjani Chakraborty  
Coordinator, NPTEL  
IIT Kharagpur

Indian Institute of Technology Kharagpur

PRINCIPAL  
IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT.



Roll No: NPTEL20EE75S52230154

To validate and check scores: <https://nptel.ac.in/noc>



This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, <https://nptel.ac.in/noc/>

Roll No: NPTEL20CS65542410682

To  
MATHESHWARI  
116-NORTH STREET,V.ALAMBALAM,V.ALAMBALAM  
(P.T), CHINNASLAM (T.K), KALLAKURICHI  
(D.T).  
TAMIL NADU - 606301  
PH. NO :6379581481



Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:2

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



# NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

**MATHESHWARI**

for successfully completing the course

## Cloud Computing

with a consolidated score of **55** %

Online Assignments	20.42/25	Proctored Exam	34.37/75
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Total number of candidates certified in this course: 2209

Prof. G P Raja Sekhar  
Dean, Continuing Education  
IIT Kharagpur

*Principals*  
Sep-Nov 2020  
(8 week course)

Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,

PRINCIPAL

IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI DT

Prof. Debjani Chakraborty  
Coordinator, NPTEL  
IIT Kharagpur



Indian Institute of Technology Kharagpur



Roll No: NPTEL20CS65542410682

To validate and check scores: <https://nptel.ac.in/noc/>

This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, <https://nptel.ac.in/noc/>

Roll No: NPTEL20CS65S42410671

To  
K SARULATHA  
D/O K.KAMARAJ,AMBETHKAR  
STREET,PRITHIVIMANGALAM(COLONY),  
THIYAGADURUGAM (POST), KALLAKURICHI  
(DISTRICT),606 206.  
D/O K.KAMARAJ, AMBETHKAR  
STREET,PRITHIVIMANGALAM(COLONY),  
THIYAGADURUGAM (POST), KALLAKURICHI  
(DISTRICT),606 206.  
KALLAKURICHI  
TAMILNADU - 606206  
PH. NO :8111022496



Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:2

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



# NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

**K SARULATHA**

for successfully completing the course

## Cloud Computing

with a consolidated score of **54** %

Online Assignments	22.08/25	Proctored Exam	32.29/75
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Total number of candidates certified in this course: 2209

Prof. G P Raja Sekhar  
Dean, Continuing Education  
IIT Kharagpur

Sep-Nov 2020  
(8 week course)

**Dr. R. GURUMANI, M.E., Ph.D., M.B.A., M.ISTE., F.I.E.,**

**PRINCIPAL**

**IDHAYA ENGG. COLLEGE FOR WOMEN  
CHINNASALEM-606 201, KALLAKURICHI, DT.**

Prof. Debjani Chakraborty  
Coordinator, NPTEL  
IIT Kharagpur



Indian Institute of Technology Kharagpur



Roll No: NPTEL20CS65S42410671

To validate and check scores: <https://nptel.ac.in/noc/>