

# KAMARAJ

**COLLEGE OF ENGINEERING & TECHNOLOGY**



(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

S.P.G.Chidambara Nadar - C.Nagammal Campus  
S.P.G.C. Nagar, K.Vellakulam - 625 701 (Near VIRUDHUNAGAR).

S.No	Particulars	Details
1	Academic Year	: 2023- 2024
2	Regulation	: 2021
3	Department Name	: EEE
4	Name of the Value-added course	: Value added course on PLC Automation
5	No. of Credits	: 2
6	Category: Theory/Lab/Hands-on/Skill based etc	: Hands-on
7	Name and Details of the Joint-organization (industry/NGO etc)	: IPCS global Solutions Pvt. Ltd, Coimbatore
8	Resource person details	: Ms.Mythili, Embedded Engineer IPCS Global Automation Pvt., Ltd, Coimbatore
9	Three Member Committee details	: Dr. D. Prince Winston, Head & Prof./EEE Dr.B.Gurukarthik babu, AP / EEE Mr.R.Ganesan, AP / EEE
10	VAC Coordinator Details	: S.JEGAN
11	Duration (30 h mandatory)	: 5 Days - 35 Hours
12	Period (From-To)	: 01-08-2023 to 05-08-2023
13	Venue	: PSS Lab

Verified  
 28/11/2023  
 S. Dhivakarini  
 AP-CSE

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(An Autonomous Institution - Affiliated to Anna University, Chennai)

S.P.G. Chidambara Nadar - C. Nagammal Campus

S.P.G.C. Nagar, K. Vellakulam - 625 701, (Near Virudhunagar), Madurai District.

Submitted to the SECRETARY for approval through the PRINCIPAL

Book No

EEE

Date 03-06-2023

Sl. No 85

Subject: Requestion to conduct Value added course  
on PLC Automation by IPCS global solutions  
(2023-2024-odd sem)

Private Limited, Kerala. (Accommodation + food needed for resource person at free of cost in KCET)

Batch strength : 30 (III year)

Duration : 5 days (11-07-2023 to 15-07-2023)

course fee per student + components : 2300 (1300 + 1000) (Proposal enclosed)

Total amount in Rs:  $2300 \times 30 = 69,000$

I GST

12,420

Total amount (including GST)

81,420

Signature of Faculty  
03/06/23  
(S. JAGAN)

OFFICE USE

PRINCIPAL

Value Added Course Eng

- 1) Account Head
- 2) Budget allotted
- 3) Amount committed / Spent sofar
- 4) Balance available

OM

Treasurer

Secretary





Value added course on PLC Automation

Syllabus

**C-Programming** 6 hours

Introduction-basic programs-arithmetical operation-loop functions-logic gates and operators.

**Arduino and IoT introduction and basic components interfacing** 6 hours

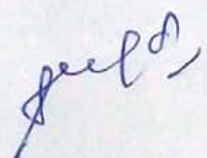
Array concept using arduino-LED glow programs.

**Arudino using sensors** 6 hours

Arduino two way switch using ultrasonic and IR sensors.

**PIC16F887 interface with real time applications** 6 hours

LED glow using relay and seven segment programs in protues and MPlab.

  
Staff In charge

  
HOD/EEB

BOS approval



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## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

7. **Dr. M. Sudalaimani**, Assistant Professor / EEE presented the list of online NPTEL courses, **Value Added Courses** and Skill development Courses for R2021. He also presented the UG & PG syllabus (R2020) related amendments.
8. **Dr. M. Sudalaimani**, Assistant Professor / EEE presented the detailed syllabi of UG (R2021) Courses offered to the other Department.
9. **Dr. D. Prince Winston**, Professor & Head / EEE presented the department progress over the last 6 months.
10. Suggestions given by Experts for each UG course (R2021) based on syllabus presented follows herein

S. No.	Name of the Course	Comments
1.	Transmission and Distribution	<ul style="list-style-type: none"><li>• Dr. Sishaj P Simon suggested to change the title of subject Transmission and Distribution to Transmission Distribution system.</li></ul>
2.	SDCE 01 Practical Course on Solar PV Systems	<ul style="list-style-type: none"><li>• Dr. Sishaj P Simon suggest to add book "Solar Photovoltaic Technology and Systems_ A Manual for Technicians, Trainers and Engineers" by Chetan Singh Solanki</li></ul>

11. **Mr. K. Ganesan**, Assistant Professor / EEE proposed the vote of thanks to all the external and internal members and the meeting adjourned.

*[Signature]*

Staff Incharge

*[Signature]*  
HOD/EEE



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Date: 28.07.2023

### Department of Electrical and Electronics Engineering

Submitted to the Principal through Dean (Academic Courses)

Sub: Requesting permission to nominate the three member committee for **Value added course** - 2021 - 2025 Batch III year UG candidates in 2023 - 2024 ODD Semester - Reg.

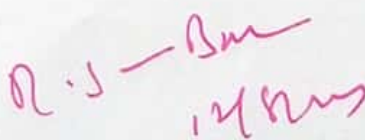
As per the current needs in industry, we need to provide the **Value added course** for 2021 - 2025 Batch III year UG candidates in 2023 - 2024 ODD Semester. In connection with this clause, three members committee has been constituted to scrutinize the **Value added course** evaluation.

#### Members List

S. No.	Members	Category
1	Dr. D. Prince Winston, Head & Prof./EEE	Head of the Department
2	Dr.B.Gurukarthik babu, AP / EEE	PG chairperson
3	Mr.R.Ganesan, AP / EEE	UG course coordinator

We hereby request you to provide permission to nominate the above said three members committee to review the **Value added course**.

  
HoD/EEE

  
Dean (Academic Courses)

  
Principal



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**Department of Electrical and Electronics Engineering**

**Submitted to the Principal through Dean (Academic Courses)**

Sub: Requisition to recommend "Value added course on "PLC Automation" for 2021 - 2025 Batch UG candidates in 2023 - 2024 ODD Semester - Reg.

As per the current needs in industry, we need to provide the Value added course for 2021 - 2025 Batch III year UG candidates in 2023 - 2024 ODD Semester. In connection with this clause, three members committee has been constituted to scrutinize the Value added course evaluation, meeting has been convened on 28-07-2023 (01.30 PM to 02.30 PM) at PG14, Academic Block - D, EEE Department, Kamaraj College of Engineering and Technology, Virudhunagar.

**Members List**

S. No.	Members	Category	Signature
1	Dr. D. Prince Winston, Head & Prof./EEE	Head of the Department	
2	Dr.B.Gurukarthik babu, AP / EEE	PG chairperson	
3	Mr.R.Ganesan, AP / EEE	UG course coordinator	

The three member committee has recommended the Value added course "PLC Automation" (2023 - 2024 ODD semester) for 2021 - 2025 Batch

HoD/EEE

*N.J. - Dean*  
*12/8/23*  
Dean (Academic Courses)

Principal



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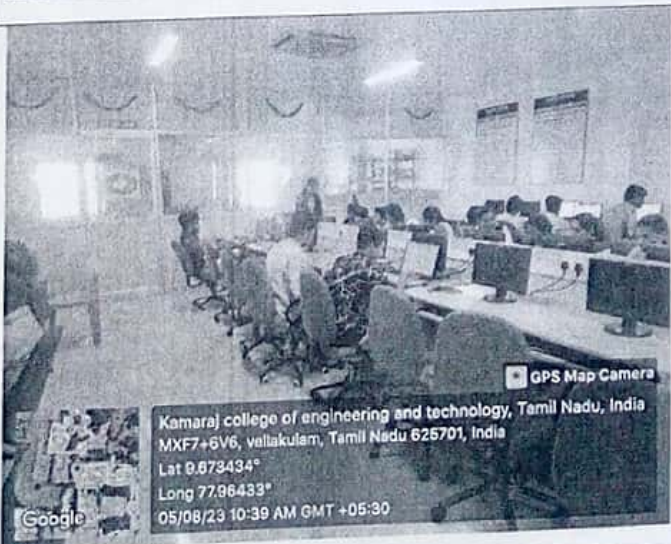
Department of Electrical and Electronics Engineering

In association with IPCS Global Automations Pvt. Ltd., Coimbatore

Value Added Course on "PLC Automation"

2023-24 ODD Semester (August 2023)

Class: III EEE (2021-2025) Batch





  
Staff Incharge

  
HOD / EEE



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**Department of Electrical and Electronics Engineering**

**In association with IPCS Global Automations Pvt. Ltd., Coimbatore**

**Value Added Course on "PLC Automation"**

**2023-24 ODD Semester (August 2023)**

**Class: III EEE (2021-2025) Batch**

## **Circular**

It is informed that an assessment in offline mode is scheduled on 05-08-2023 at 2.30 PM to 3.30 PM to evaluate the learning acquired during the Value added course.

  
STAFF INCHARGE

  
HOD / EEE



# IPCS Global Solutions Pvt Ltd, Coimbatore.

## WORKSHOP ASSESSMENT - EMBEDDED C

NAME : K. Kavya

DATE : 05-08-23

DEPARTMENT : EEE

PLACE : PSS lab

YEAR/SEM : III & V

TIME : 2:30 P.M

COLLEGE NAME : Kamaraj college of Engineering & Technology

1. What is Arduino?

Arduino is open source hardware and software. It has 14 digital pins and 6 analog pins. Arduino has ATmega 328P microcontroller Board

2. How many Pins are in Arduino UNO?

Digital - 14

Analog - 6

3. Arduino IDE consists of 2 functions. What are they?

void loop()

void setup()

4. Which Microcontroller do you use in Arduino Uno? (with Bits)

ATmega 328P.

5. How can we power an Arduino board? and list the supply-giving methods.

Powering via USB

Powering via adapter

Powering via VIN

Powering via 3.3V/5V



6. What is Sketch in Arduino?

Program is said to be sketch in the Arduino.

7. Which types of operators do you utilize when programming?

Arithmetic operator  
Logical operator  
Assignment operator  
Relational operator  
Bitwise operator

8. What is a variable? And then specify the criteria for naming the variable.

Naming the values is known as variable.  
Variable should not start from Numbers.  
A-Z, a-z, 0-9 can be used as variable.

9. Write the syntax?

For Loop : (initialization ; condition ; increment or decrement)

While Loop : while(condition) / increment or decrement

10. Why do we employ sensors? Give some examples of sensors you are aware of.

sensor is used to sense the given inputs and gives the desired output.  
Example: Voltage sensor, current sensor, IR sensor etc.

11. Which language do you use in Arduino programming?

C programming language is used in Arduino programming

12. Expansion for IDE?

IDE - Integrated Development Environment

13. What is the use of the Vin pin present on some Arduino Boards?

VIN pin is present in Arduino Board for giving supply to the board.

14. How many times the function runs on every startup of the Arduino system?

Setup: void setup() runs once in the Arduino

Loop: void loop() runs more than once until the condition ends.

15. What mode should we put the Arduino pin to, in order for object detection to work with the Ultrasonic Sensor?

Digital ~~Analog~~ Read mode is used to detect the object.



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Class: III EEE (2021-2025) Batch

S.No.	Roll No.	Name	01-08-2023		02-08-2023		03-08-2023		04-08-2023		05-08-2023	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	21UEE001	SRI VISHNU VARSHINI.M	M.S. Subhakar	M.S. Subhakar	M.S. Subhakar	M.S. Subhakar	M.S. Subhakar	M.S. Subhakar	M.S. Subhakar	M.S. Subhakar	M.S. Subhakar	M.P. Chandrasekhar
2	21UEE002	THIGAN.K.J	K. Siva	K. Siva	K. Siva	K. Siva	K. Siva	K. Siva	K. Siva	K. Siva	K. Siva	AB
3	21UEE003	AJAY.M	Ajay	Ajay	Ajay	Ajay	Ajay	Ajay	Ajay	Ajay	Ajay	Ajay
4	21UEE004	SHREENACHIAAR.K.P	K.P. Shree	K.P. Shree	K.P. Shree	K.P. Shree	K.P. Shree	K.P. Shree	K.P. Shree	K.P. Shree	K.P. Shree	K.P. Shree
5	21UEE005	GOPI KRISHNA.D	D. Gopi	D. Gopi	D. Gopi	D. Gopi	D. Gopi	D. Gopi	D. Gopi	D. Gopi	D. Gopi	D. Gopi
6	21UEE006	KAVYA.K	K. Kavay	K. Kavay	K. Kavay	K. Kavay	K. Kavay	K. Kavay	K. Kavay	K. Kavay	K. Kavay	K. Kavay
7	21UEE007	KARPAGAVALLI.P	P. Karpa	P. Karpa	P. Karpa	P. Karpa	P. Karpa	P. Karpa	P. Karpa	P. Karpa	P. Karpa	P. Karpa
8	21UEE008	THANGASELVAM.R	R. Thang	R. Thang	R. Thang	R. Thang	R. Thang	R. Thang	R. Thang	R. Thang	R. Thang	R. Thang
9	21UEE009	VETRIVEL.G	G. Vetriv	G. Vetriv	G. Vetriv	G. Vetriv	G. Vetriv	G. Vetriv	G. Vetriv	G. Vetriv	G. Vetriv	G. Vetriv
10	21UEE010	DHARANI.D	D. Dhara	D. Dhara	D. Dhara	D. Dhara	D. Dhara	D. Dhara	D. Dhara	D. Dhara	D. Dhara	D. Dhara
11	21UEE011	DARSAN.S	S. Darshan	S. Darshan	S. Darshan	S. Darshan	S. Darshan	S. Darshan	S. Darshan	S. Darshan	S. Darshan	S. Darshan
12	21UEE012	ABINATH.M.P	M.P. Abinath	M.P. Abinath	M.P. Abinath	M.P. Abinath	M.P. Abinath	M.P. Abinath	M.P. Abinath	M.P. Abinath	M.P. Abinath	M.P. Abinath
13	21UEE013	ABDUL MALIK.A	A. Abdul Malik	A. Abdul Malik	A. Abdul Malik	A. Abdul Malik	A. Abdul Malik	A. Abdul Malik	A. Abdul Malik	A. Abdul Malik	A. Abdul Malik	A. Abdul Malik
14	21UEE014	MANOJ.R	R. Manoj	R. Manoj	R. Manoj	R. Manoj	R. Manoj	R. Manoj	R. Manoj	R. Manoj	R. Manoj	R. Manoj
15	21UEE015	CAROLINE RESHMA.N	N. Reshma	N. Reshma	N. Reshma	N. Reshma	N. Reshma	N. Reshma	N. Reshma	N. Reshma	N. Reshma	N. Reshma
16	21UEE016	KALAIMANI.N	N. Kalaimani	N. Kalaimani	N. Kalaimani	N. Kalaimani	N. Kalaimani	N. Kalaimani	N. Kalaimani	N. Kalaimani	N. Kalaimani	N. Kalaimani







**Department of Electrical and Electronics Engineering**  
 In association with IPCS Global Automations Pvt. Ltd., Coimbatore  
 Value Added Course on "PLC Automation"  
 2023-24 ODD- V Semester (August 2023)  
 Class: III EEE (2021-2025) Batch  
 Regulation: R2021

S.No.	Register Number	Roll Number	Name of the student	Assessment (60)	Coding (40)	Total (100)
1	920421105019	21UEE001	SRI VISHNU VARSHINI.M	55	40	95
2	920421105022	21UEE002	THIGAN.K.J	58	40	98
3	920421105003	21UEE003	AJAY.M	40	40	80
4	920421105018	21UEE004	SHREENACHIAAR.K.P	40	40	80
5	920421105008	21UEE005	GOPI KRISHNA.D	45	40	85
6	920421105013	21UEE006	KAVYA.K	58	40	98
7	920421105011	21UEE007	KARPAGAVALLI.P	56	40	96
8	920421105021	21UEE008	THANGASELVAM.R	45	40	85

S.No.	Register Number	Roll Number	Name of the student	Assessment (60)	Coding (40)	Total (100)
9	920421105023	21UEE009	VETRIVEL.G	45	40	85
10	920421105007	21UEE010	DHARANI.D	50	40	90
11	920421105006	21UEE011	DARSAN.S	60	40	100
12	920421105002	21UEE012	ABINATH.M.P	43	40	83
13	920421105001	21UEE013	ABDUL MALIK.A	50	40	90
14	920421105014	21UEE014	MANOJ.R	0	0	0
15	920421105005	21UEE015	CAROLINE RESHMA.N	40	40	80
16	920421105010	21UEE016	KALAIMANI.N	55	40	95
17	920421105020	21UEE017	SUBHA SHRI.M	57	40	97
18	920421105009	21UEE019	JANANI PRIYA.A	45	40	85
19	920421105017	21UEE020	SHALINI.R	40	40	80
20	920421105016	21UEE021	SENTHIL VELAN.B	0	0	0



S.No.	Register Number	Roll Number	Name of the student	Assessment (60)	Coding (40)	Total (100)
21	920421105015	21UEE022	PRAKASH.A	49	40	89
22	920421105012	21UEE023	KARTHICK GOWTHAM.C	0	0	0
23	920421105004	21UEE024	BHARATHI.K	49	40	89
24	920421105305	21UEE025	VISWAMBARAN.R	50	40	90
25	920421105301	21UEE026	JEGADEESH MANIYAN.A	50	40	90
26	920421105304	21UEE027	NARESHKUMAR.V	51	40	91
27	920421105303	21UEE028	NALLAIAH.M	48	40	88
28	920421105306	21UEE029	YOGESHKUMAR.M	53	40	93
29	920421105302	21UEE030	MOHAMED SAJUDHEEN. A	60	40	100
30	920421105307	21UEE031	PRAVEEN KUMAR.S	57	40	97

*[Signature]*  
Staff In-charge

*[Signature]*  
HoD / EEE

*[Signature]*  
Dean (Academic Courses)

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Value Added Course on "PLC Automation"

2023-24 ODD- V Semester (August 2023)

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Regulation: R2021

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1	920421105019	21UEE001	SRI VISHNU VARSHINEM	55
2	920421105022	21UEE002	THIGAN.K.J	58
3	920421105003	21UEE003	AJAY.M	40
4	920421105018	21UEE004	SHREENACHIAAR.K.P	40
5	920421105008	21UEE005	GOPI KRISHNA.D	45
6	920421105013	21UEE006	KAVYA.K	58
7	920421105011	21UEE007	KARPAGAVALLI.P	56
8	920421105021	21UEE008	THANGASELVAM.R	45
9	920421105023	21UEE009	VETRIVEL.G	45
10	920421105007	21UEE010	DHARANI.D	50
11	920421105006	21UEE011	DARSAN.S	60
12	920421105002	21UEE012	ABINATH.M.P	43
13	920421105001	21UEE013	ABDUL MALIK.A	50
14	920421105014	21UEE014	MANOJ.R	0
15	920421105005	21UEE015	CAROLINE RESHIMA.N	40
16	920421105010	21UEE016	KALAIMANI.N	55
17	920421105020	21UEE017	SUBHA SHRI.M	57
18	920421105009	21UEE019	JANANI PRIYA.A	45
19	920421105017	21UEE020	SHALINI.R	40



S.No.	Register Number	Roll Number	Name of the student	Assessment (60)
20	920421105016	21UEE021	SENTHIL VELAN.B	0
21	920421105015	21UEE022	PRAKASH.A	49
22	920421105012	21UEE023	KARTHICK GOWTHAM.C	0
23	920421105004	21UEE024	BHARATHI.K	49
24	920421105305	21UEE025	VISWAMBARAN.R	50
25	920421105301	21UEE026	JEGADEESH MANIYAN.A	50
26	920421105304	21UEE027	NARESHKUMAR.V	51
27	920421105303	21UEE028	NALLAIAH.M	48
28	920421105306	21UEE029	YOGESHKUMAR.M	53
29	920421105302	21UEE030	MOHAMED SAJUDHEEN.A	60
30	920421105307	21UEE031	PRAVEEN KUMAR.S	57



*jeel*  
Staff Incharge

*[Signature]*  
HOD/EEE

**IPCS GLOBAL SYSTEMS LLP**

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Coimbatore, Tamil Nadu 641004

Department of Electrical and Electronics Engineering

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Value Added Course on "PLC Automation"

2023-24 ODD- V Semester (August 2023)

Class: III EEE (2021-2025) Batch

Regulation: R2021

S.No	Register Number	Roll Number	Name of the student	Problem statement and Design (10)	Implementation (10)	Presentation (10)	Viva (10)	Total (40)
1	920421105019	21UEE001	SRI VISHNU VARSHINI.M	10	10	10	10	40
2	920421105022	21UEE002	THIGAN.K.J	10	10	10	10	40
3	920421105003	21UEE003	AJAY.M	10	10	10	10	40
4	920421105018	21UEE004	SHREENACHIAAR.K.P	10	10	10	10	40
5	920421105008	21UEE005	GOPI KRISHNA.D	10	10	10	10	40
6	920421105013	21UEE006	KAVYA.K	10	10	10	10	40
7	920421105011	21UEE007	KARPAGAVALLI.P	10	10	10	10	40
8	920421105021	21UEE008	THANGASELVAM.R	10	10	10	10	40
9	920421105023	21UEE009	VETRIVEL.G	10	10	10	10	40
10	920421105007	21UEE010	DHARANI.D	10	10	10	10	40
11	920421105006	21UEE011	DARSAN.S	10	10	10	10	40
12	920421105002	21UEE012	ABINATH.M.P	10	10	10	10	40
13	920421105001	21UEE013	ABDUL MALIK.A	10	10	10	10	40

**IPCS GLOBAL SYSTEMS LLP**

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1st Floor, Swathi Towers Opp. GRG Matriculation School Periya Nagar, Peelamedu Hope College  
Coimbatore, TamilNadu 641004



S.No	Register Number	Roll Number	Name of the student	Problem statement and Design (10)	Implementation (10)	Presentation (10)	Viva (10)	Total (40)
14	9204211050 14	21UEE01 4	MANOJ.R	0	0	0	0	0
15	9204211050 05	21UEE01 5	CAROLINE RESHMA.N	10	10	10	10	40
16	9204211050 10	21UEE01 6	KALAIMANI.N	10	10	10	10	40
17	9204211050 20	21UEE01 7	SUBHA SHRI.M	10	10	10	10	40
18	9204211050 09	21UEE01 9	JANANI PRIYA.A	10	10	10	10	40
19	9204211050 17	21UEE02 0	SHALINI.R	10	10	10	10	40
20	9204211050 16	21UEE02 1	SENTHIL VELAN.B	0	0	0	0	0
21	9204211050 15	21UEE02 2	PRAKASH.A	10	10	10	10	40
22	9204211050 12	21UEE02 3	KARTHICK GOWTHAM.C	0	0	0	0	0
23	9204211050 04	21UEE02 4	BHARATHI.K	10	10	10	10	40
24	9204211053 05	21UEE02 5	VISWAMBARAN.R	10	10	10	10	40
25	9204211053 01	21UEE02 6	JEGADEESH MANIYAN.A	10	10	10	10	40
26	9204211053 04	21UEE02 7	NARESHKUMAR.V	10	10	10	10	40
27	9204211053 03	21UEE02 8	NALLAIAH.M	10	10	10	10	40
28	9204211053 06	21UEE02 9	YOGESHKUMAR.M	10	10	10	10	40

Register Number	Roll Number	Name of the student	Problem statement and Design (10)	Implementation (10)	Presentation (10)	Viva (10)	Total (40)
9204211053 02	21UEE03 0	MOHAMED SAJUDHEEN A	10	10	10	10	40
9204211053 07	21UEE03 1	PRAVEEN KUMAR S	10	10	10	10	40



*jeep*  
Staff In charge

*[Signature]*  
HOD/EEE



Department of Electrical and Electronics Engineering

In association with IPCS Global Automations Pvt. Ltd., Coimbatore  
Value Added Course on "PLC Automation"

2023-24 ODD- V Semester (August 2023)

Class: III EEE (2021-2025) Batch

Regulation: R2021

S.No.	Register Number	Roll Number	Name of the student	Assessment (60)	Coding (40)	Total (100)
1	920421105019	21UEE001	SRI VISHNU VARSHINI.M	55	40	95
2	920421105022	21UEE002	THIGAN K.J	58	40	98
3	920421105003	21UEE003	AJAY.M	40	40	80
4	920421105018	21UEE004	SHREENACHIAAR.K.P	40	40	80
5	920421105008	21UEE005	GOPI KRISHNA.D	45	40	85
6	920421105013	21UEE006	KAVYA.K	58	40	98
7	920421105011	21UEE007	KARPAGAVALLI.P	56	40	96
8	920421105021	21UEE008	THANGASELVAM.R	45	40	85
9	920421105023	21UEE009	VETRIVEL.G	45	40	85
10	920421105007	21UEE010	DHARANI.D	50	40	90
11	920421105006	21UEE011	DARSAN.S	60	40	100
12	920421105002	21UEE012	ABINATH.M.P	43	40	83
13	920421105001	21UEE013	ABDUL MALIK.A	50	40	90
14	920421105014	21UEE014	MANOJ.R	0	0	0

**IPCS GLOBAL SYSTEMS LLP**

info@ipcsglobal.com

+91-90477 18684

www.ipcsglobal.com

2nd Floor, Swathi Towers Opp. GRG Matriculation School Periya Nagar, Peelamedu Hope College  
Coimbatore, Tamil-Nadu 641004

S.No.	Register Number	Roll Number	Name of the student	Assessment (60)	Coding (40)	Total (100)
15	920421105005	21UEE015	CAROLINE RESHMA.N	40	40	80
16	920421105010	21UEE016	KALAIMANI.N	55	40	95
17	920421105020	21UEE017	SUBHA SHRI.M	57	40	97
18	920421105009	21UEE019	JANANI PRIYA.A	45	40	85
19	920421105017	21UEE020	SHALINI.R	40	40	80
20	920421105016	21UEE021	SENTHIL VELAN.B	0	0	0
21	920421105015	21UEE022	PRAKASH.A	49	40	89
22	920421105012	21UEE023	KARTHICK GOWTHAM.C	0	0	0
23	920421105004	21UEE024	BHARATHI.K	49	40	89
24	920421105305	21UEE025	VISWAMBARAN.R	50	40	90
25	920421105301	21UEE026	JEGADEESH MANIYAN.A	50	40	90
26	920421105304	21UEE027	NARESHKUMAR.V	51	40	91
27	920421105303	21UEE028	NALLAIAH.M	48	40	88
28	920421105306	21UEE029	YOGESHKUMAR.M	53	40	93
29	920421105302	21UEE030	MOHAMED SAJUDHEEN.A	60	40	100
30	920421105307	21UEE031	PRAVEEN KUMAR.S	57	40	97

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Coimbatore, Tamil Nadu 641004



*Staff Incharge*

*Handwritten signature and date*



08:57 AM

View results

Respondent

1

DHARANID

00:49

Time to complete

About Technical Presentation \*

- Good
- Very good
- Satisfactory

About the lab facility \*

- Good
- Very good
- Satisfactory

About the course materials \*

- Good
- Very good
- Satisfactory

Effectiveness of the course \*

- Good
- Very good
- Satisfactory

5. Any other points to improve the conduct of program like Value added Course in future. \*

System needs to be improved

*Handwritten signature*

*Handwritten text*

*Handwritten signature and date*  
16/08/2023

new results

Respondent

6 SRIVISHNU VARSHINI.M

01:55

Time to complete

About Technical Presentation \*

- Good
- Very good
- Satisfactory

About the lab facility \*

- Good
- Very good
- Satisfactory

About the course materials \*

- Good
- Very good
- Satisfactory

Effectiveness of the course \*

- Good
- Very good
- Satisfactory

Any other points to improve the conduct of program like Value added Course in future. \*

to comments

*[Handwritten Signature]*  
Staff Incharge

*[Handwritten Signature]*  
Hod/eee



VIEW results

Respondent

9 NALLAIAH.M

01:29

Time to complete

1 About Technical Presentation \*

- Good
- Very good
- Satisfactory

2 About the lab facility \*

- Good
- Very good
- Satisfactory

3 About the course materials \*

- Good
- Very good
- Satisfactory

4 Effectiveness of the course \*

- Good
- Very good
- Satisfactory

5 Any other points to improve the conduct of program like Value added Course in future. \*

Useful my career

*jeep 2*  
Staff In charge

*[Signature]*  
HOD/CEE

# Value added course on "PLC automation"-01-08-2023 to 05-08-2023

25

Responses

02:48

Average time to complete

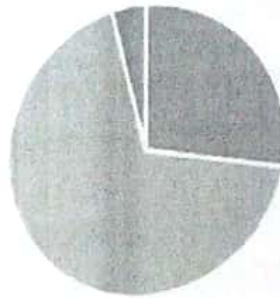
Active

Status

## 1. About Technical Presentation

- Good
- Very good
- Satisfactory

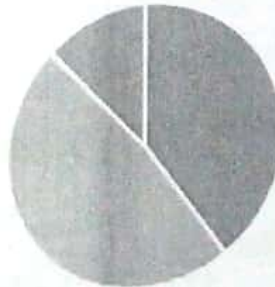
7  
17  
1



## 2. About the lab facility

- Good
- Very good
- Satisfactory

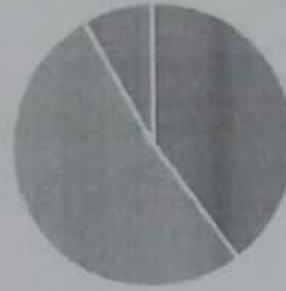
10  
12  
3





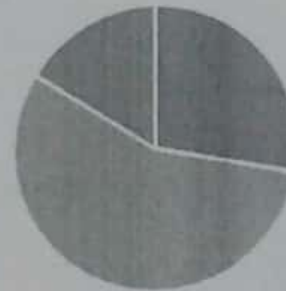
### 3. About the course materials

- Good 10
- Very good 13
- Satisfactory 2



### 4. Effectiveness of the course

- Good 7
- Very good 14
- Satisfactory 4



5. Any other points to improve the conduct of program like Value added Course in future.

25 Responses

#### Latest Responses

- "VAC from reputed institutes will be more advantageous also.."
- "Still need more number of days(atleast 2 week) of course."

Update

5 respondents (21%) answered **Good** for this question.

Learn about Arduino Systems COI  
 Yes practical or workshop Noo lot of Things day  
 better value **Good** course Usefu  
 week  
 course for our carriculum company NO MORE COMM

*Staff Incharge*

*[Signature]*



**(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)**

S.P.G.Chidambara Nadar - C.Nagammal Campus  
S P G C. Nagar, K.Vellakulam - 625 701 (Near VIRUDHUNAGAR).

**Department of Electrical and Electronics Engineering**

**In association with IPCS Global Automations Pvt. Ltd., Coimbatore  
Value Added Course on "PLC Automation"**

**2023-24 ODD Semester (August 2023)**

**Class: III EEE (2021-2025) Batch**

### Report

Arduino board designs use a variety of microprocessors and controllers. The boards are equipped with sets of digital and analog input/output (I/O) pins that may be interfaced to various expansion boards ('shields') or breadboards (for prototyping) and other circuits. The boards feature serial communications interfaces, including Universal Serial Bus (USB) on some models, which are also used for loading programs. The microcontrollers can be programmed using the C and C++ programming languages(Embedded C), using a standard API which is also known as the Arduino Programming Language, inspired by the Processing language and used with a modified version of the Processing IDE. In addition to using traditional compiler tool chains, the Arduino project provides an integrated development environment (IDE) and a command line tool developed in Go.

The PIC was originally intended to be used with the General Instrument CP1600, the first commercially available single-chip 16-bit microprocessor. The CP1600 had a complex bus that made it difficult to interface with, and the PIC was introduced as a companion device offering ROM for program storage, RAM for temporary data handling, and a simple CPU for controlling the transfers. While this



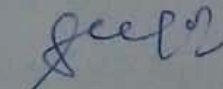
offered considerable power, GI's marketing was limited and the CP1600 was not a success. When the company spun off their chip division to form Microchip in 1985, sales of the CP1600 were all but dead. By this time, the PIC had formed a major market of its own, and it became one of the new company's primary products.

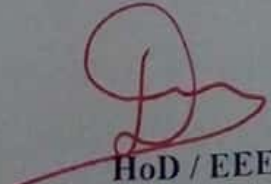
In this program students have learned about basics of C programming language, Memory allocation, Structure of C program, Pre-processors, Variables, Data types, operators, Looping statements (while and for), etc. Also they have learned about Arduino UNO and its applications and sensors and programming in Arduino software. Introduction to PIC16F887 (Peripheral Interface Controller), Name definition for PIC16F887, Features of PIC16F887, code in MPLAB software, simulation of Proteus software, programming in MPLAB IDE software and Proteus software was studied.

### **Elements of this Course**

The course is comprised of the following elements:

- C-Programming
- Arduino and IoT introduction and basic components interfacing
- Arduino task using sensors
- PIC16F887 interface with real time applications
- Assessment
- Programming assessment

  
Staff In-charge

  
HoD / EEE

Tax Invoice



IPCSGLOBAL SOLUTIONS PVT LTD  
 Beejay Tower, 4th Floor, Rajaji Road  
 Shenoy's Kochi  
 Ernakulam  
 GSTIN/UIN: 32AAFC18564H1ZF  
 State Name: Kerala, Code: 32  
 E-Mail: finance@ipcsautomation.com

Invoice No.  
 IPCS/071/2023-24

Dated  
 25-Jun-23  
 Mode/Terms of Payment

Terms of Delivery

To  
 HOD/EEE  
 /

Buyer (Bill to)  
 AMARAJ COLLEGE OF ENGINEERING & TECHNOLOGY

GSTIN/UIN : 33AAATK1431B1ZH

Particulars	HSN/SAC	Rate (Incl. of Tax)	Rate per	Amount
COURSE FEE				69,000.00
WORKSHOP				
COMPONENTS: Voltage Sensor, Current Sensor, Jumper Wires Ultrasonic Sensor				12,420.00
IGST 18%				
Total				₹ 81,420.00

E. & O.E

Amount Chargeable (in words)

INR Eighty One Thousand Four Hundred Twenty Only

HSN/SAC	Taxable Value	Integrated Tax Rate	Integrated Tax Amount	Total Tax Amount
	69,000.00	18%	12,420.00	12,420.00
Total	69,000.00		12,420.00	12,420.00

Tax Amount (in words)

INR Twelve Thousand Four Hundred Twenty Only

Company's Bank Details

A/c Holder's Name: IPCS GLOBAL SOLUTIONS PVT LTD  
 Bank Name: ICICI BANK  
 A/c No: 001005013712  
 Branch & IFS Code: M G ROAD BRANCH, ERNAKULAM & ICIC00000310  
 for IPCSGLOBAL SOLUTIONS PVT LTD

This is a Computer Generated Invoice



Authorised Signatory

*[Signature]*  
 Staff Incharge

*[Signature]*  
 HOD/EEE

AUTOMATION | BMS | DIGITAL MARKETING | EMBEDDED | IOT | INFORMATION TECHNOLOGY

IPCSGLOBAL SOLUTIONS Pvt. Ltd

Email : info@ipcsglobal.com  
 Website : www.ipcsglobal.com

4th Floor, Beejay Towers, Rajaji Road, Shenoy's, Kochi, Kerala - 682035



# Memorandum of Understanding

Between

**Kamaraj College of Engineering and Technology,**

**(Near VIRUDHUNAGAR)**

&

**IPCS Global Solutions Private Limited, Coimbatore**

This agreement is made and entered into, between **Kamaraj College of Engineering and Technology, (Near VIRUDHUNAGAR)** and **IPCS Global Solutions Private Limited, Coimbatore** on **28/07/2023**.

## 1. OBJECTIVES OF THE MOU

**The objective of this Memorandum of Understanding is**

To promote the Industry-academic interface between Kamaraj College of Engineering and Technology, (Near VIRUDHUNAGAR) and IPCS Global Solutions Private Limited, Coimbatore.

## 2. PROPOSED MODES OF COLLABORATION

Kamaraj College of Engineering and Technology, (Near VIRUDHUNAGAR) & IPCS Global Solutions Private Limited, Coimbatore are proposed to collaborate through

1. Inviting IPCS Global Solutions Private Limited, Coimbatore to Kamaraj College of Engineering and Technology, (Near VIRUDHUNAGAR) for invited **lectures and workshops**.
2. To have experts from IPCS Global Solutions Private Limited, Coimbatore, in the **Board of Studies to give expert opinion for Professional Electives, Value Added Courses** and help in designing the curriculum related to industry needs.
3. Permitting our students for **Industrial Visit, Internship, undertake observation study (Mini project) and Main project work** at IPCS Global Solutions Private Limited, Coimbatore.
4. Undertaking **research projects and providing consultancy services** by the faculty members of the institute to IPCS Global Solutions Private Limited, Coimbatore.

Contd..2

### 3. TERMS AND TERMINATION

This MoU unless extended by mutual written agreement of the parties, shall expire 3 years after the effective date specified in the opening paragraph. This MoU may be amended or terminated earlier by mutual written agreement of the parties at any time. Either party shall have the right to unilaterally terminate this MoU upon 60 days prior written notice to the other party.

### 4. RELATIONSHIP

Nothing in this MOU shall be construed to make party a partner, an agent or legal representative of the other for any purpose.

### 5. ASSIGNMENT

It is understood by the parties herein this MoU is based on the professional competence and expertise of each party and hence, neither party shall transfer or assign this agreement, or rights or obligations arising hereunder, either wholly or in part to any third party.

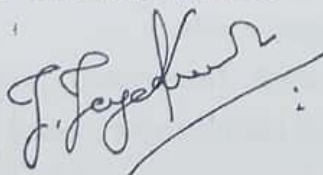
### 6. SIGNED IN DUPLICATE

This MoU is executed in duplicate with each copy being an official version of the agreement and having equal legal validity.

By signing below the parties acting by their duty authorized officers, have caused this Memorandum of Understanding to be executed, effective as the day and year first above written.

On behalf of  
Kamaraj College of Engineering and  
Technology  
(Near VIRUDHUNAGAR)

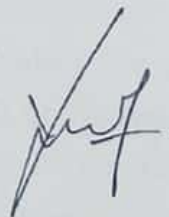
By



Name : Thiru.T.J.Jeyakumar, M.B.A.  
Title : Secretary  
Date :

On behalf of  
IPCS Global Solutions Pvt Ltd.,  
Coimbatore

By



Name :  
Title :  
Date :