



KONGUNADU COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS)

Namakkal –Trichy Main Road, Tholurpatti, Thottiyam, Tiruchirapalli – 621 215.

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai, Accredited by NBA (CSE,ECE,EEE & MECH)
Accredited by NAAC, Recognized by UGC with 2(f) & 12(B) and ISO 9001:2015 Certified Institution

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COE: INDUSTRIAL AUTOMATION LAB

The department of EEE established Industrial Automation laboratory on June 2018.

Centre of Excellence – Industrial Automation aids the students for providing technical skills, brand them as future professionals and assist them to improve their performance by imparting career oriented courses periodically.

This laboratory provides PLC controllers, HMI, VFD and SCADA for learning, designing, testing and trouble shooting on their innovative ideas of all the students and faculty members.

This laboratory provides periodical in-house training programs and workshops for the both students and engineering professionals to bring out professional and technical excellence in industrial automation in order to bridge the gap between industries and academia.

The main objective is to disseminate automation knowledge and appropriate skill practices through proper system of training and certification to meet the demand of the automation era.

The outcomes of this laboratory allow the students to design, develop and troubleshooting a project/prototype/product for industrial real time problems.

Features of this COE

- Established in June 2018
- To bridge the gap between our college and industrial needs
- To trigger the students creative thinking
- Contains Siemens, Mitsubishi, Fuji and Delta brand software and hardware's
- To give the proper training and certification to meet the demand of the automation era.

Objectives

- To elicit our students imagination beyond the circle in order to find many solutions for real time applications using Industrial Controller.
- To conduct hands on training, workshops, seminars for students in terms of development of new research ideas, project, product and patent developments.

Research and Training Activities

- Students can have hands on trainings on PLC controller, HMI, SCADA and VFD etc,
- Real time projects can be developed for our own college by our students alone
- To make innovative mini projects and main projects in Automation
- To facilitate students Programming, dumbing and debugging knowledge in Industrial Automation and IoT
- Discussing the experimental investigation for all kind of real time problems

Facilities Available

Software Facilities

- TIA Portal V15, TIA Portal V13 (SIEMENS)
- SIMATIC WinCC Advanced (SIEMENS)
- SX Programmer standard (FUJI)
- GX Works2 (Mitsubishi)
- GT Designer3 (Mitsubishi)
- Webaccess SCADA, 75 I/O points
- WPL Soft

Hardware Facilities

- Computer - (Inter Core i5 CPU, 8.00 GB RAM, 1TB HDD)
- PLC - S7-1200 with Panel accessories - SIEMENS
- PLC Based Variable Frequency Drive with Panel accessories – SIEMENS
- HMI KTP700 Basic - SIEMENS
- PLC FX3GE with panel accessories - MITSUBISHI
- HMI 7inch Colour display - FR-D720S-025-EC – MITSUBISHI
- VFD Drive - FR-D720S-025-EC – MITSUBISHI
- PLC CPU - SPE NWOP40 – FUJI

MoU Signed:

- Kongunadu College of Engineering and Technology(Autonomous) signed MoU with Basell Automation System Private Limited, Chennai on 18th April 2023.



- Kongunadu College of Engineering and Technology(Autonomous) signed MoU with Siemens Centre of Excellence in Manufacturing, National Institute of Technology, Tiruchirappalli on 12th March 2020.



Programmes Organized Through MoU

S. No.	Academic year	Name of the Program	Resource Person	No. of Participants	Duration
1	2024-2025	Value Added Course – VACEE08 – PLC Programming for Manufacturing Industry	Mr.Thulasiram J Senior Project Engineer, Mr.Madhavan P.S Project Engineer, Basell Automation System Pvt Ltd, Chennai.	68	17.12.2024 To 22.12.2024
2	2023-2024	Industrial Automation using Siemens PLC and SCADA	Mr.Antony Shane Caris F Project Engineer Basell Automation System Pvt Ltd Chennai-600032 Mr.Tamilnesan P Assistant Professor / EEE Kongunadu College of Engineering and Technology Thottiam Trichy-621215	48(E-30S+I-18S)	08.03.2024 to 09.03.2024
3	2022-2023	Emerging Trends in Industrial Automation using PLC & SCADA (Workshop)	Mr.K.Sathyanarayanan Senior Project Engineer Basell Automation System Private Limited No: 66,Krishna Industrial Estate, Chennai-600095	37	18.04.2023
4	2022-2023	Workshop - Future Trends in Industrial Automation	Mr.Giridharan.S Project Manager Mr.Siva.R Project Engineer Basell Automation System Private Limited Chennai-600095	56	13.10.2022 to 15.10.2022
5	2020 - 2021	Industrial Internet of Things (Value added course)	Mr.Manju J R IoT Application Engineer, Siemens Center of Excellence in Manufacturing, National Institute of Technology, Tiruchirappalli.	45	08.02.2021 To 15.02.2021 (5 Days)

Achievements by the Students through CoE

Project Expo and Hackathon:

- Final Round Participated in **National Level Project Competition** organized by **RAMIAH Institute of Technology, Bengaluru** on 20th April 2023.

Students: (II Year, Batch of 2021-25)

Mahilmithran R S
Mouleeswaran K
Kavya S
Keerthana Shivani C

- Prize winners in National level **BIT TECHFEST IAROS 2021** organized by **Bannari Amman Institute of Techonology, Sathiyamangalam**, won FIRST PRIZE on 12& 13, Apr 2021.

Students: (III Year, Batch of 2018-22)

Rajesh P
Vignesh KS
Premkumar K

- Prize winners in National level **BIT TECHFEST IAROS 2021** organized by **Bannari Amman Institute of Techonology, Sathiyamangalam**, won THIRD PRIZE on 12& 13, Apr 2021.

Students: (II Year, Batch of 2019-23)

Sundar C
Bharathkumar R

Placements:

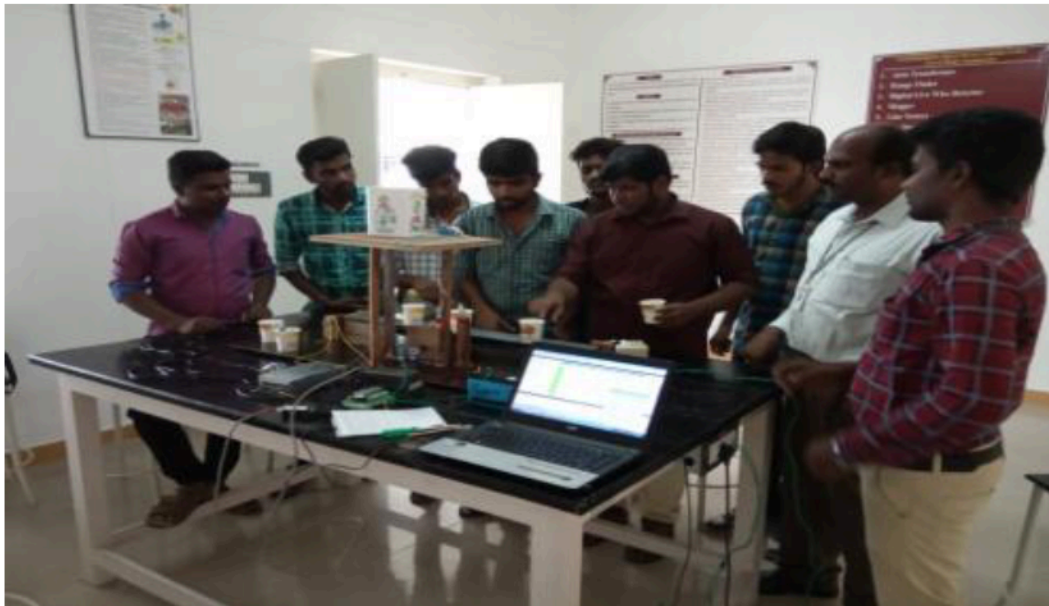
- Placed in Tessolve Semiconductor Pvt. Ltd.
Students: (IV Year, Batch of 2020-24)
Vignesh S
- Placed in Mitsuba SICAL (I) Pvt. Ltd., Chennai
Students: (IV Year, Batch of 2020-24)
Jenith S
- Placed in Pinnacle Infotech Solutions.
Students: (IV Year, Batch of 2020-24)
Dharshini S
Gokul N
Keerthana M
Prasanth D
Suresh S
Sureshkumar A

Swetha A

- Placed in vhb ENGINEERING SOLUTIONS PVT LTD, Chennai
Students: (IV Year, Batch of 2020-24)
Balamurugan A
- Placed in Mitsuba SICAL (I) Pvt. Ltd., Chennai
Students: (IV Year, Batch of 2020-23)
Arulselvan G
Jawahar S
Jeevarathinam P
Lalithapriya K
Nithish C
Srinivasan K R
Abdulrahman S
Gopinath.G
Monish E
Sudhakar K
- Placed in Schinder Electric, Chennai
Students: (IV Year, Batch of 2019-23)
Gokul S
Bharathkumar R
- Placed in Shree Abirami Engineering Works Pvt. Ltd, Chennai
Students: (IV Year, Batch of 2018-22)
Guhan T
Kishore A
Manikandan V
Manoj S
Parthipan P
Ranjithkumar C
Suriya Prakash V
Harikrishnan M
- Placed in Schinder Electric, Chennai
Students: (IV Year, Batch of 2015-19)
Pradeepa

Students Projects Completed Through CoE

- **Automated Coffee distributed machine**



- **PLC based Automated Rain Umbrella**



- **Automated Sugar(Jaggery) Making Machine**



- **Substation Automation using PLC and SCADA**



Consultancy Work Through CoE

S.No	Academic Year	Date	Name of the Work	No of Quantity	Name of the company	Total Rs.
1	23-24	02.11.2023	Automation control panel for hydraulic press machines	01	Innovative Solutions, Bangalore	2,36,000

Publications through CoE

S.NO	TITLE	PUBLISHER	STATUS
1.	AI Empowered MPPT Technique in Solar Power Generation	<i>IEEE Proceedings of the International Conference on Recent Trends in Computer Communication and Business Management (ICRTCCB 2023) on 10th March, 2023 at Sethu Institute of Technology, Virudhunagar, ISBN.No:978-93-5810-814-9, pg.21.</i>	Conference
2.	Domestic Smart Sugar (JAGGERY) Making Machine using PLC	<i>GRENZE International Journal of Engineering & Technology (GIJET), Vol.5 (1) (Special Issue), Grenze ID: 01.GIJET.5.1.47,© Grenze Scientific Society, May 2019,pp.308-312.</i>	Published
3.	Substation Automation using PLC and SCADA	<i>ICEECT-2020, 59, Sep 15-17, 2020, Sri Shakthi Institute of Technology, Coimbatore, India.</i>	Conference
4.	Domestic Smart Sugar (JAGGERY) Making Machine using PLC	<i>GRENZE International Journal of Engineering & Technology (GIJET), Vol.5 (1) (Special Issue), Grenze ID: 01.GIJET.5.1.47,© Grenze Scientific Society, May 2019,pp.308-312.</i>	Conference

Value Added Courses:

- Two value added courses conducted per year



Students explain on Power Automation working field in VAC

Hands on Training:



Hands on Training of Siemens S7-1200 PLC

Programs organized details

S. No.	Academic year	Number of Programmes Organized
1.	2025 - 2026	2
2.	2024 – 2025	4
3.	2023 – 2024	5
4.	2022 – 2023	5
5.	2021 – 2022	4
6.	2020 – 2021	6
7.	2019 – 2020	5
8.	2018 – 2019	5
TOTAL		36

Beneficiaries Details

PARTICIPANTS	ACADEMIC YEAR							
	2025-26	2024-25	2023-24	2022-23	2021-22	2020-21	2019-20	2018-19
INTERNAL STUDENTS	70	145	240	294	142	318	102	93
EXTERNAL STUDENTS	27	71	71	11	30	05	42	28
INTERNAL FACULTY	2	-	-	07	-	-	05	-
EXTERNAL FACULTY	-	-	-	-	04	02	23	-
TOTAL	99	216	311	312	176	325	172	121

Academic Year wise program details

SLNO	Name of the Industry/COE	Name of the Event Seminar/Workshop /FDP	Topic of the Event	Number of Participants		Date
				KNCET	Outside College	
1.	CoE – Industrial Automation Lab, KNCET	Hands on Training	PLC Applications in Industrial Automation	15	27	26.09.2025
2.	J.P.N Infotech, Chennai	Guest Lecture	Advanced Embedded System	57	-	09.09.2025
3.	CoE – Industrial Automation Lab, KNCET	Hands on Training	PLC Programming for Industrial Process Optimization	06	34	07.03.2025
4.	MCore Technologies Pvt Ltd	Guest Lecture	Optimization of Industrial Energy Systems for a	75	-	21.02.2025

	Nagasandra Post Bangalore- 560073		Sustainable Future			
5.	CoE – Industrial Automation Lab, KNCET	Skill Training	HMI Design and Development for Industrial Applications	-	37	09.08.2024 to 10.08.2024
6.	MCore Technologies Pvt Ltd, Nagasandra Post, Bangalore- 560073	Seminar	Industrial Energy Systems	64	-	26.07.2024
7.	Innovative Solutions, Bangalore.	Guest Lecture	Safety Integration in Industrial Automation	75	-	16.03.2024
8.	Basell Automation System Pvt Ltd Chennai-600032	Workshop	Industrial Automation using Siemens PLC and SCADA	18	30	08.03.2024 to 09.03.2024
9.	ABE Semiconductor Designs, Chennai	Value Added Course	VACEE14 - AI for Electrical Engineering	65	-	19.12.2023 to 24.12.2023
10.	Cadence Design Systems San Jose California.	Webinar	Evolution of Semiconductors in Industry 4.0	72	-	28.11.2023(9: 30am to 11:00am)
11.	ECI Systems Private Limited – Unit III Thirumudivakka m, Chennai-600132	Workshop	Industrial Robotization using PLC and SCADA	10	41	01.09.2023 to 02.09.2023
12.	Basell Automation System Private Limited Chennai-600095	Workshop	Emerging Trends in Industrial Automation using PLC & SCADA	36	-	18.04.2023
13.	AXIS Global Automation, Chennai.	Webinar	Recent Trends in Industry 4.0	88	-	20-02-2023 (02:00 PM to 03:00 PM)
14.	L&P Renewable System Integrator, Erode	Webinar	Role Of PLC & SCADA in Power Sector	66	-	19.11.2022 (10:00 AM to 11:30 AM)
15.	Basell Automation System Private	Workshop	Future Trends in Industrial Automation	45	11	13.10.2022 to 15.10.2022

	Limited Chennai-600095					
16.	Tessolve Semiconductor Pvt. Ltd, Bangalore.	Value Added Course	Industrial IoT using MSP430 and CC3200 Launchpad	66	-	07.07.2022 to 12.07.2022
17.	CoE - Industrial Automation Lab	ValueAddedCourse	PLC Programming for Manufacturing Industry	66	-	01.09.2021 To 04.05.2022 (48 Hours)
18.	Ingenious Power and Control Systems Pvt.Ltd., Chennai	Hands on Training	SIEMENS S7 1200 PLC – TIA Portal	16	24	31.03.2022 To 01.04.2022 (2 Days)
19.	Innovative Solutions Bengaluru-91.	Value Added Course	Smart Industrial Safety Solutions	28	---	29.11.2021 To 03.12.2021 (5 Days)
20.	Elia Automation Solutions Pvt Ltd, Hydrabad, India	Workshop	Innovations in Plant Automation – Studio 5000 Logix Designer	32	10	01.11.2021 To 02.11.2021 (2 Days)
21.	CoE - Industrial Automation Lab	Value Added Course	SCADA – Wonderware Intouch	72	---	25.05.2021 To 06.06.2021 (5 Days)
22.	Honeybees Technologies, Bangalore.	Workshop	Innovations in Industrial Automation - TIA Portal Siemens	23	7	08.05.2021 To 09.05.2021
23.	CoE - Industrial Automation Lab	Value Added Course	Process Plant Automation	24	---	08.02.2021 To 31.03.2021 (33 Hours)
24.	CVR College of Engineering (Autonomous) Vastungar, Hyderabad	Webinar	Recent Trends in Artificial Intelligence and its Application in Power System	69	---	16.03.2021
25.	Siemens Center of Excellence in Manufacturing, National Institute of Technology, Tiruchirappalli.	Value Added Course	Industrial Internet of Things	45	---	08.02.2021 To 15.02.2021 (5 Days)

26.	Dunnes Stores, Dublin, Ireland.	Webinar	Internet of things in Industries	85	---	24.10.2020
27.	Multivista Global Pvt Ltd., Bangalore.	Webinar	Industrial Safety Solutions	44	34	09.05.2020
28.	CoE - Industrial Automation Lab	Hands on Training	Industrial Processing Automation – PLC, SCADA.	15	11	13.03.2020
29.	CoE - Industrial Automation Lab	Workshop	Machine Tool Automation	25	---	18.02.2020
30.	CoE - Industrial Automation Lab	Value Added Course	Power Automation	18	---	21.11.19 To 25.11.19 (5 Days)
31.	CoE - Industrial Automation Lab	Workshop	TIA Based Industrial Automation(Powered by Siemens)	5	20	07.08.2019
32.	CoE - Industrial Automation Lab	Value Added Course	Basic Industrial Automation	17	---	23.05.19 to 27.05.19 (5 Days)
33.	CoE - Industrial Automation Lab	Hands on Training	Factory Automation(Mitsubishi Electric)		28	11.01.2019
34.	CoE - Industrial Automation Lab	Value Added Course	Factory Automation using PLC(Fuji) And SCADA	16	---	29.11.2018 to 04.12.2018 (5 Days)
35.	CoE - Industrial Automation Lab	Value Added Course	Automation using PLC(Fuji) And SCADA	17	---	17.11.2018 to 27.11.2018 (5 Days)
36.	CoE - Industrial Automation Lab	Value Added Course	Basic Industrial Automation(PLC)	43	---	07.06.2018 to 09.06.2018 (5 Days)
37.	Infinity Technologies, Trichy	Value Added Course	Basic Industrial Automation(PLC)	48	---	26.05.2018 to 30.05.2018 (5 Days)
38.	CoE - Industrial Automation Lab	Value Added Course	Basic Industrial Automation(PLC)	33	---	19.05.2018 to 23.05.2018 (5 Days)

