



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
DEEMED TO BE UNIVERSITY  
(Under Section 3 of UGC Act 1956)

## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### VALUE ADDED COURSE DETAIL

#### ACADEMIC YEAR-2018-19

1	Course Name	On board ship Automation
2	Course offered by	CDCE School of Automation and Robotics, Chennai.
3	Co-Ordinator	Dr.S.V Saravanan
4	Instructor	Mr.Rajasekar Jayakumar, CDCE School of Automation
5	Course	-
6	Class	BE-EEE(Marine)
7	Number of Students per batch	24
8	Duration	80hrs
9	No. of Hrs /Week	6 hrs/Week
10	Prerequisite	Basics of Electrical and Electronics Engineering
11	About the Course	PLC and SCADA training to the students to familiarize with onboard ship automation
12	Course Objective	To impart the knowledge of on board ship Automation
13	Course Outcome	Able to apply PLC programming, HMI operation and SCADA
14	Topics Covered	Syllabus Attached
15	Learning References	List of reference attached
16	Assessment Method	Hands on Training
17	Attendance Sheet	Copies Attached
18	Photograph	Copies Attached
19	Certificate Copies	Copies Attached
20	Feedback About The Course	Copies Attached
21	Action Taken Report	Copies Attached



## ORGANIZING COMMITTEE

### Convener:

**Dr. T. Sasilatha,**

Professor and Dean, Dept of EEE & Dean Academic

### Program Coordinator:

**Dr. S.V. Saravanan, Assistant Professor**

E-mail ID: [saravanan.sv@ametuniv.ac.in](mailto:saravanan.sv@ametuniv.ac.in)

## COURSE STRUCTURE:

The value added course will be more added advantage with regular academic subjects for EEE student. Students of third year EEE benefited through this training.

Training Modules	Total No. of Students	Duration (Hrs)
Module 1 to Module 6	43	80
Syllabus Structure		
Description	Theory	Practicals
Basics of industrial automation, sensors and mechatronic	3 Hrs	
Switch gears	3 Hrs	3 Hrs
Electrical and automation panel wirings	3 Hrs	3 Hrs
Sensors and transducers	3 Hrs	6 Hrs
Instrumentations	3 Hrs	3 Hrs
Programmable logic controllers	10 Hrs	20 Hrs
Human machine interface	3 Hrs	6 Hrs
Smart positioning using servo motors, stepper motors and VFD's	3 Hrs	6 Hrs
Barcode automation system	3 Hrs	3 Hrs

## ABOUT THE UNIVERSITY

AMET University has got a unique distinction of being the first maritime university established in India and offering academic, research, training in maritime education as well as offering consultancy service to maritime sector for the past seven years contributing much to produce human resources to the shipping industry in India and abroad. Invariably at least five students cadets of AMET proudly occupy exalted positions like chief engineers, captains and other key posts in every ship sailing in the international waters. Further AMET proudly holds the prestigious award of "A1 outstanding grade" conferred by the directorate general of shipping, Ministry of shipping, Government of India.

## ABOUT THE DEPARTMENT

Department of Electrical and Electronics Engineering is established in the year 2008 with the objective of imparting quality education of international standards and to produce highly innovative Electrical and Electronics Engineers capable of solving global maritime challenges. The Department offers 4 years U.G program in EEE and 2 years P.G program in Power Systems and Doctoral programs in core areas as well as interdisciplinary domains.

The department houses state-of the art laboratories, smart class rooms and well stacked library to impart teaching and research. The department is committed to community development and conducts regular extension activities to benefit the local and needy villagers around the university. The department is proud of its legacy of Alumni who occupies key positions in world class Maritime/Non-Maritime sectors

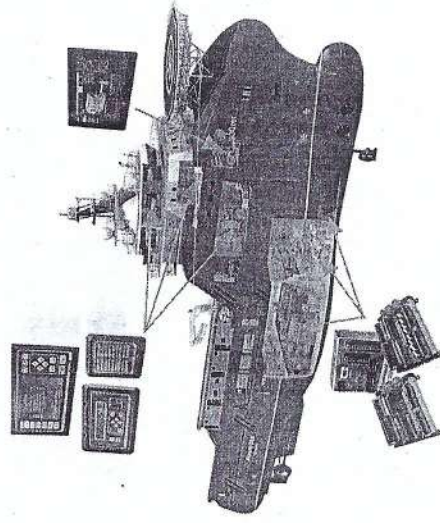


**AMET**  
ACADEMY OF MARITIME EDUCATION AND TRAINING  
DEEMED TO BE UNIVERSITY  
(Under Section 3 of UGC Act 1956)

## VALUE ADDED TRAINING PROGRAM

ON

## ON-BOARD SHIP AUTOMATION



Organized by

## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

In association with



Ministry of MSME, Govt. of India

CDCE Automation

Certification by MSME

Govt. of India



**AMET**  
ACADEMY OF MARITIME EDUCATION AND TRAINING  
DEEMED TO BE UNIVERSITY  
(Under Section 3 of UGC Act 1956)

## REPORT

*on*

VALUE ADDED TRAINING PROGRAM

## "ON-BOARD SHIP AUTOMATION"

Organized By  
Department of Electrical and Electronics Engineering

In Collaboration with



**MSME**  
MICRO, SMALL & MEDIUM ENTERPRISES  
सूक्ष्म, लघु एवं मध्यम उद्यम

OUR STRENGTH • हमारी शक्ति

Ministry of MSME, Govt. of India

**CDCE Automation**

**Certification by MSME**

Govt. of India

Date: JAN 2018- OCT 2018

Venue:

**AMET Deemed to be University**

Convener

**Dr. T. Sasilatha**

Professor and Dean

Department of Electrical and Electronics Engineering

Co-Ordinators

**Dr. S. V. Saravanan**, Professor / EEE



The following students attended the training programme.

STUDENT LIST			
Course : B.E. - Electrical & Electronics Engineering-Marine			
Batch : BE(EEEM)- Third Year			
S.No	Register Number	Roll Number	Student Name
1	AEE16001	EE297	ABIRAJ.B
2	AEE16002	EE298	AVINASH VIJAY
3	AEE16003	EE299	AZARUTHEEN S
4	AEE16004	EE300	BEER MOHAMED UVAIZ. N
5	AEE16005	EE301	DHARUN.S
6	AEE16006	EE302	DINESH KUMAR.M
7	AEE16007	EE303	GANESHBABU K
8	AEE16008	EE304	GOKULAKRISHNAN.B
9	AEE16009	EE305	IMMANVEL PETER
10	AEE16010	EE306	JOEL ROBINSON
11	AEE16011	EE307	KARAN R K
12	AEE16012	EE308	KARTHI. P
13	AEE16013	EE309	KRISHNARAJ.S
14	AEE16014	EE310	MOHAN RAJ R
15	AEE16015	EE311	NAVEEN RAJ. R
16	AEE16016	EE312	PUNNOOSE BENNY
17	AEE16019	EE315	SAMUEL MATHEW.G
18	AEE16020	EE316	SNAHASISH SAHA
19	AEE16022	EE318	SURIYA R
20	AEE16023	EE319	VENKATESH S
21	AEE16024	EE320	VIGNESH.B
22	AEE16026	EE323	SREERAG SREEKUMAR
23	AEE16027	EE324	PRAVEEN.D

IV Year EEE

S. No	Roll No	Student Name
1	EE267	AKSHAI
2	EE268	ALLWIN RENOLD.S
3	EE269	ANANTHAN UNNI
4	EE270	BASKAR. M
5	EE273	DIVINS SOBI S
6	EE274	INBARAJ I
7	EE275	JAYA KRISHNAN K
8	EE276	JAYAKUMAR M
9	EE278	JOSEPH MELVIN B
10	EE279	MANIKANDAN N
11	EE280	NANDHAKUMAR G

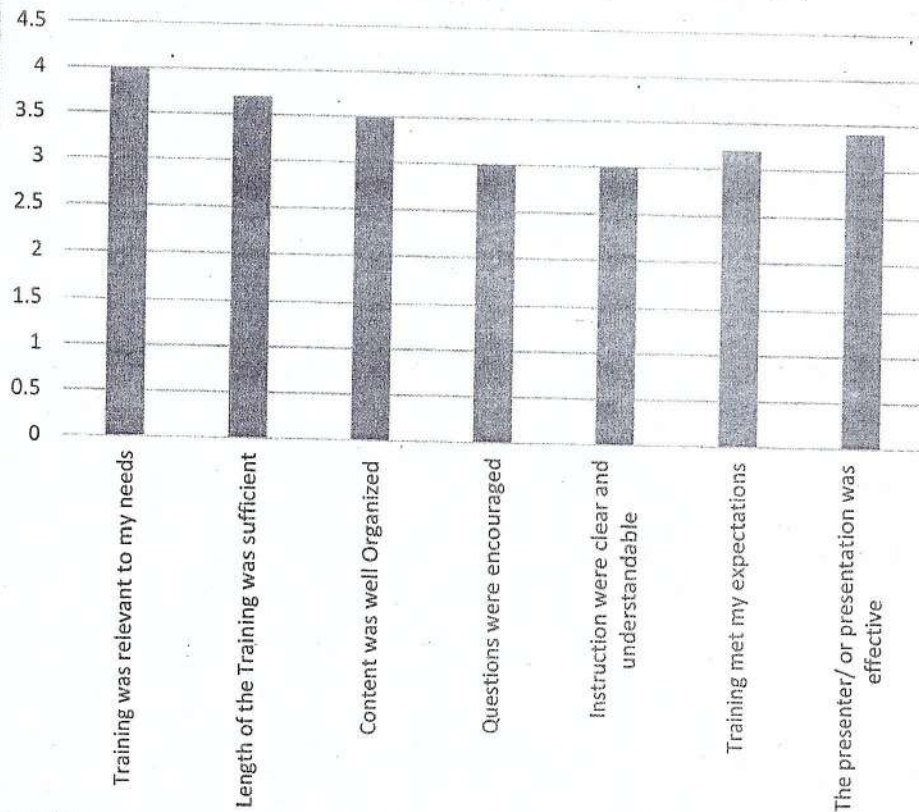




**AMET**  
ACADEMY OF MARITIME EDUCATION AND TRAINING  
DEEMED TO BE UNIVERSITY  
(Under Section 3 of UGC Act 1956)

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING  
VALUE ADDED TRAINING PROGRAM  
ON  
ON BOARD SHIP AUTOMATION  
*In association with*  
CDCE AUTOMATION

**FEEDBACK FROM STUDENTS**



Action Taken: Found Satisfactory







**MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA**

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

**प्रमाण पत्र**

**Certificate**

*This is to certify that*

**MR. L. SOUNDARA PANDIYAN**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

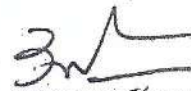
*on*

**INDUSTRIAL AUTOMATION**

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**



## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. K. VIGNESH**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

on

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
PRINCIPAL DIRECTOR





## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. L. AJITH KUMAR**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

on

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
PRINCIPAL DIRECTOR



## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. S. ALLWIN RENOLD  
AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM  
PRINCIPAL DIRECTOR**





**MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA**

**एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा**

**Ministry of Micro, Small & Medium Enterprises**

**सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय**

**Government of India Organization**

**भारत सरकार की संस्था**

**प्रमाण पत्र**

**Certificate**

*This is to certify that*

**MR. GORAKAVI LAKSHMI PRASANNA KUMAR**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

**INDUSTRIAL AUTOMATION**

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

**DATE : August 8, 2019**  
**PLACE : AGRA**



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**



## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. M. BASKAR**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**





**MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA**

**एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा**

**Ministry of Micro, Small & Medium Enterprises**

**सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय**

**Government of India Organization**

**भारत सरकार की संस्था**

**प्रमाण पत्र**

**Certificate**

*This is to certify that*

**MR. N.MANIKANDAN**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

**INDUSTRIAL AUTOMATION**

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

**DATE : August 8, 2019**  
**PLACE : AGRA**



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**



## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. R.NAVIN KUMAR**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

on

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
PRINCIPAL DIRECTOR





**MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA**

**एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा**

**Ministry of Micro, Small & Medium Enterprises**

**सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय**

**Government of India Organization**

**भारत सरकार की संस्था**

**प्रमाण पत्र**

**Certificate**

*This is to certify that*

**MR. M. JAYAKUMAR**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

**INDUSTRIAL AUTOMATION**

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

**DATE : August 8, 2019**  
**PLACE: AGRA**



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**



**MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA**

**एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा**

**Ministry of Micro, Small & Medium Enterprises**

**सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय**

**Government of India Organization**

**भारत सरकार की संस्था**

**प्रमाण पत्र**

# **Certificate**

*This is to certify that*

**MR. A. SURYA KUMAR**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

## **INDUSTRIAL AUTOMATION**

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

**DATE : August 8, 2019**  
**PLACE : AGRA**



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**





## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. E. RAJKUMAR**

**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

on

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
PRINCIPAL DIRECTOR



**MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA**

**एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा**

**Ministry of Micro, Small & Medium Enterprises**

**सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय**

**Government of India Organization**

**भारत सरकार की संस्था**

**प्रमाण पत्र**

**Certificate**

*This is to certify that*

**MR. G.NANDHAKUMAR**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

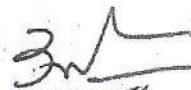
*on*

**INDUSTRIAL AUTOMATION**

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

**DATE : August 8, 2019**  
**PLACE : AGRA**



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**





**MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA**

**एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा**

**Ministry of Micro, Small & Medium Enterprises**

**सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय**

**Government of India Organization**

**भारत सरकार की संस्था**

**प्रमाण पत्र**

**Certificate**

*This is to certify that*

**MR. B. JOSEPH MELVIN**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*


*on*

**INDUSTRIAL AUTOMATION**

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

**DATE : August 8, 2019**  
**PLACE : AGRA**



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**



## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एमएसएमई - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. K. JAYAKRISHNAN**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*


on

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**





## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. S. YASHWANTH**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
PRINCIPAL DIRECTOR



**MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA**

**एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा**

**Ministry of Micro, Small & Medium Enterprises**

**सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय**

**Government of India Organization**

**भारत सरकार की संस्था**

**प्रमाण पत्र**

**Certificate**

*This is to certify that*

**MR. M. MATHAN DEEPU**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

**INDUSTRIAL AUTOMATION**

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

**DATE : August 8, 2019**  
**PLACE : AGRA**



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**





## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. S. DHARUN**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
PRINCIPAL DIRECTOR



**MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA**

**एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा**

**Ministry of Micro, Small & Medium Enterprises**

**सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय**

**Government of India Organization**

**भारत सरकार की संस्था**

**प्रमाण पत्र**

**Certificate**

*This is to certify that*

**MR. R. MOHAN RAJ**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

**INDUSTRIAL AUTOMATION**

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

**DATE : August 8, 2019**  
**PLACE : AGRA**



  
**R. PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**





## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. SNAHASISH SAHA**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

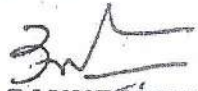
*on*

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**



## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एमएसएमई - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. D.PRAVEEN**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

on

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
PRINCIPAL DIRECTOR





## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. S. AZARUTHEEN**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE: AGRA



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**



# MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

## Certificate

*This is to certify that*

**MR. S. VENKATESH**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE: AGRA



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**





**MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA**

**एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा**

**Ministry of Micro, Small & Medium Enterprises**

**सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय**

**Government of India Organization**

**भारत सरकार की संस्था**

**प्रमाण पत्र**

# **Certificate**

*This is to certify that*

**MR. R. NAVEEN RAJ**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

## **INDUSTRIAL AUTOMATION**

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

**DATE : August 8, 2019**  
**PLACE : AGRA**



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**



## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. K. GANESH BABU**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**





**MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA**

**एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा**

**Ministry of Micro, Small & Medium Enterprises**

**सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय**

**Government of India Organization**

**भारत सरकार की संस्था**

**प्रमाण पत्र**

**Certificate**

*This is to certify that*

**MR. M. DINESH KUMAR**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

**INDUSTRIAL AUTOMATION**

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

**DATE : August 8, 2019**  
**PLACE : AGRA**



  
**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**



## MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. ANITOSH MONDAL**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

## INDUSTRIAL AUTOMATION

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



**R.PANNEERSELVAM**  
**PRINCIPAL DIRECTOR**





**MSME-TECHNOLOGY DEVELOPMENT CENTRE, AGRA**

एम0एस0एम0ई0 - तकनीकी विकास केन्द्र, आगरा

Ministry of Micro, Small & Medium Enterprises

सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

Government of India Organization

भारत सरकार की संस्था

प्रमाण पत्र

# Certificate

*This is to certify that*

**MR. A. SURYA**  
**AMET DEEMED TO BE UNIVERSITY**

*has successfully completed training*

*on*

**INDUSTRIAL AUTOMATION**

*from 21.02.2018 to 02.04.2018, 10 Days, 80 hours at Chennai*

DATE : August 8, 2019  
PLACE : AGRA



  
**R.PANNEERSELVAM**  
PRINCIPAL DIRECTOR



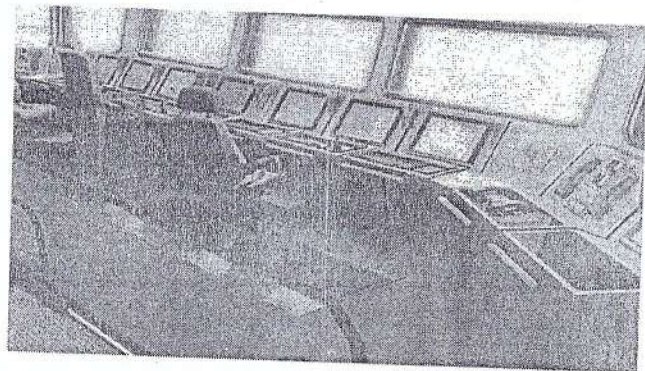
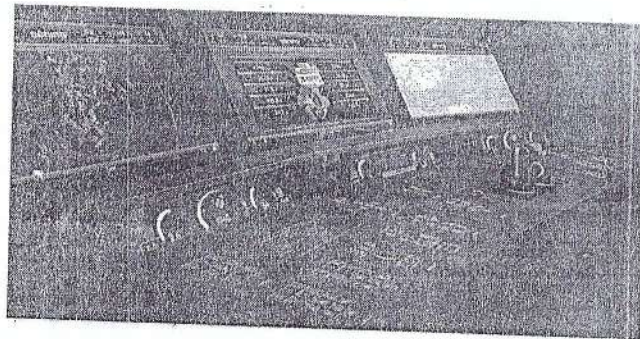
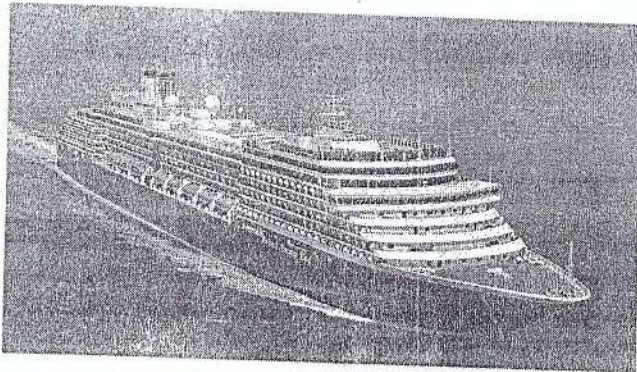
# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
(Declared as Deemed to be University u/s 3 of UGC Act 1956)

**Department of Electrical and Electronics Engineering**

**Center of Excellence for On-Board Ship Automation**  
By

**CDCE School of Automation and Robotics**  
(in association with MSME, Govt of India)



**Academy of Maritime Education and Training**

(Declared as Deemed to be University u/s 3 of UGC Act 1956)

135, East Coast Road, Kanathur - 603112, India

Email: [office@ametuniv.ac.in](mailto:office@ametuniv.ac.in) / <http://www.ametuniv.ac.in> / Tel: 32577030 / 32577002



## VISION:

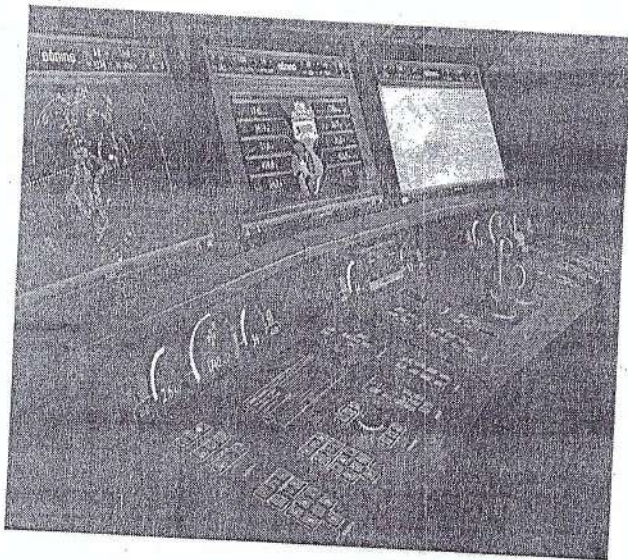
To become a world class research facility and skill development center for the On-board Ship Automation by CDCE School Of Automation a

nd Robotics in association with Ministry of Micro, Small and Medium Enterprises(MSME) Govt. of India, thereby catering to the needs of the ground minds to make vessel operations easier, safer and more efficient.

## MISSION:

- To educate the students with the state of art technologies to meet the growing challenges of the On-board Ship Automation.
- To provide technical skills and knowledge for their quality consultancy in the areas of On-board Ship Automation.

## ON BOARD SHIP AUTOMATION:



Ships are now being equipped with increasingly complicated systems that are operated by fewer operators with limited training. Marine Ship Automation portfolio consists of applications that make vessel operations easier, safer and more efficient. Whether it is for basic monitoring and control or comprehensive integrated platform management, Marine Ship has the applications to fulfill all vessel automation needs. On board ship automation leads to the next level by adding smart applications like decision support, providing guidance in critical situations.

## BENEFITS:

- Increased efficiency of all onboard processes
- Transparency for better decisions
- Scalability and viability for the future
- Cost-effectiveness and investment protection

## OBJECTIVE OF THE CENTRE:

The Center has three principal objectives:

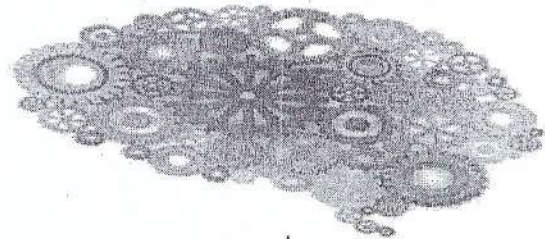


### Education and Training

To provide enhance Education and Training in the area of On board shipping and automation that caters to Mariners.

### Innovation and Research

To perform research in the field of on board shipping and to develop new understanding and innovative products



and innova



### Technology Transfer

To provide a focal point for information and technology transfer to on board shipping Automation.

## COURSE CONTENT

- Switchgear and Controls
- Electrical and Automation panel wiring
- Sensors, Transducers & Instrumentation
- Programmable Logic Controllers (PLC)
- Human Machine Interface (HMI)
- Barcode Automation systems
- Machine vision systems
- Computer Aided Manufacturing systems
- Hydraulics & Pneumatics
- Flexible Manufacturing systems
- Linear motion systems
- Smart positioning using Servo, Stepper & Variable Frequency drives





# CDCE SCHOOL OF AUTOMATION AND ROBOTICS



## SYLLABUS DETAILS

S.No.	Description	Theory	Practicals	Products Used
1	Basics of Industrial Automation, Sensors, Instrumentation and Mechatronic.	3 Hrs		
2	Switchgears.	3 Hrs	3 Hrs	Teknik, Ideal, Schneider, Land T, Meanwell, Eapl, Autonics, Omron
3	Electrical and Automation panel wirings.	3 Hrs	3 Hrs	Teknik, Ideal, Schneider, Land T, Meanwell, Eapl, Autonics, Omron
4	Sensors and Transducers	3 Hrs	6 Hrs	Autonics, Ideal, Omron, Banner, Baumer, Pepperl and Fuchs
5	Instrumentation	3 Hrs	3 Hrs	Gefran, Epoch, Janatics, SMB, Autonics, Teknik.
6	Programmable logic controllers (PLC).	10 Hrs	20 Hrs	Omron Zen, Delta, Omron CPE, Fuji Electric, Mitsubishi, Keyence
7	Human Machine Interface (HMI).	3 Hrs	6 Hrs	Fuji Monitouch 7 inches Full touch screen Colour HMI, Delta B Series 5.7 inches Full touch screen Colour HMI,
8	Smart Positioning using Servo motors Stepper motors and VFDs	3 Hrs	6 Hrs	Delta-Smart Position Servo Motor, Lead shine- Stepper motor and Omron/Delta/Fuji VFD
9	Barcode Automation systems.	3 Hrs	3 Hrs	Zebra Barcode printer and Motorola Scanner



AMET UNIVERSITY - ATTENDANCE DETAILS

S.No	Year	Name	20/10/19	21/10/19	22/10/19	23/10/19	24/10/19	25/10/19	26/10/19	27/10/19	28/10/19	29/10/19	30/10/19	31/10/19	01/11/19	02/11/19	03/11/19	04/11/19	05/11/19	06/11/19	07/11/19	08/11/19	09/11/19	10/11/19	11/11/19	12/11/19	13/11/19	14/11/19	15/11/19	16/11/19	17/11/19	18/11/19	19/11/19	20/11/19	21/11/19	22/11/19	23/11/19	24/11/19	25/11/19	26/11/19	27/11/19	28/11/19	29/11/19	30/11/19	01/12/19	02/12/19	03/12/19	04/12/19	05/12/19	06/12/19	07/12/19	08/12/19	09/12/19	10/12/19	11/12/19	12/12/19	13/12/19	14/12/19	15/12/19	16/12/19	17/12/19	18/12/19	19/12/19	20/12/19	21/12/19	22/12/19	23/12/19	24/12/19	25/12/19	26/12/19	27/12/19	28/12/19	29/12/19	30/12/19	31/12/19	01/01/20	02/01/20	03/01/20	04/01/20	05/01/20	06/01/20	07/01/20	08/01/20	09/01/20	10/01/20	11/01/20	12/01/20	13/01/20	14/01/20	15/01/20	16/01/20	17/01/20	18/01/20	19/01/20	20/01/20	21/01/20	22/01/20	23/01/20	24/01/20	25/01/20	26/01/20	27/01/20	28/01/20	29/01/20	30/01/20	31/01/20	01/02/20	02/02/20	03/02/20	04/02/20	05/02/20	06/02/20	07/02/20	08/02/20	09/02/20	10/02/20	11/02/20	12/02/20	13/02/20	14/02/20	15/02/20	16/02/20	17/02/20	18/02/20	19/02/20	20/02/20	21/02/20	22/02/20	23/02/20	24/02/20	25/02/20	26/02/20	27/02/20	28/02/20	29/02/20	01/03/20	02/03/20	03/03/20	04/03/20	05/03/20	06/03/20	07/03/20	08/03/20	09/03/20	10/03/20	11/03/20	12/03/20	13/03/20	14/03/20	15/03/20	16/03/20	17/03/20	18/03/20	19/03/20	20/03/20	21/03/20	22/03/20	23/03/20	24/03/20	25/03/20	26/03/20	27/03/20	28/03/20	29/03/20	30/03/20	31/03/20	01/04/20	02/04/20	03/04/20	04/04/20	05/04/20	06/04/20	07/04/20	08/04/20	09/04/20	10/04/20	11/04/20	12/04/20	13/04/20	14/04/20	15/04/20	16/04/20	17/04/20	18/04/20	19/04/20	20/04/20	21/04/20	22/04/20	23/04/20	24/04/20	25/04/20	26/04/20	27/04/20	28/04/20	29/04/20	30/04/20	01/05/20	02/05/20	03/05/20	04/05/20	05/05/20	06/05/20	07/05/20	08/05/20	09/05/20	10/05/20	11/05/20	12/05/20	13/05/20	14/05/20	15/05/20	16/05/20	17/05/20	18/05/20	19/05/20	20/05/20	21/05/20	22/05/20	23/05/20	24/05/20	25/05/20	26/05/20	27/05/20	28/05/20	29/05/20	30/05/20	31/05/20	01/06/20	02/06/20	03/06/20	04/06/20	05/06/20	06/06/20	07/06/20	08/06/20	09/06/20	10/06/20	11/06/20	12/06/20	13/06/20	14/06/20	15/06/20	16/06/20	17/06/20	18/06/20	19/06/20	20/06/20	21/06/20	22/06/20	23/06/20	24/06/20	25/06/20	26/06/20	27/06/20	28/06/20	29/06/20	30/06/20	01/07/20	02/07/20	03/07/20	04/07/20	05/07/20	06/07/20	07/07/20	08/07/20	09/07/20	10/07/20	11/07/20	12/07/20	13/07/20	14/07/20	15/07/20	16/07/20	17/07/20	18/07/20	19/07/20	20/07/20	21/07/20	22/07/20	23/07/20	24/07/20	25/07/20	26/07/20	27/07/20	28/07/20	29/07/20	30/07/20	31/07/20	01/08/20	02/08/20	03/08/20	04/08/20	05/08/20	06/08/20	07/08/20	08/08/20	09/08/20	10/08/20	11/08/20	12/08/20	13/08/20	14/08/20	15/08/20	16/08/20	17/08/20	18/08/20	19/08/20	20/08/20	21/08/20	22/08/20	23/08/20	24/08/20	25/08/20	26/08/20	27/08/20	28/08/20	29/08/20	30/08/20	31/08/20	01/09/20	02/09/20	03/09/20	04/09/20	05/09/20	06/09/20	07/09/20	08/09/20	09/09/20	10/09/20	11/09/20	12/09/20	13/09/20	14/09/20	15/09/20	16/09/20	17/09/20	18/09/20	19/09/20	20/09/20	21/09/20	22/09/20	23/09/20	24/09/20	25/09/20	26/09/20	27/09/20	28/09/20	29/09/20	30/09/20	01/10/20	02/10/20	03/10/20	04/10/20	05/10/20	06/10/20	07/10/20	08/10/20	09/10/20	10/10/20	11/10/20	12/10/20	13/10/20	14/10/20	15/10/20	16/10/20	17/10/20	18/10/20	19/10/20	20/10/20	21/10/20	22/10/20	23/10/20	24/10/20	25/10/20	26/10/20	27/10/20	28/10/20	29/10/20	30/10/20	31/10/20	01/11/20	02/11/20	03/11/20	04/11/20	05/11/20	06/11/20	07/11/20	08/11/20	09/11/20	10/11/20	11/11/20	12/11/20	13/11/20	14/11/20	15/11/20	16/11/20	17/11/20	18/11/20	19/11/20	20/11/20	21/11/20	22/11/20	23/11/20	24/11/20	25/11/20	26/11/20	27/11/20	28/11/20	29/11/20	30/11/20	01/12/20	02/12/20	03/12/20	04/12/20	05/12/20	06/12/20	07/12/20	08/12/20	09/12/20	10/12/20	11/12/20	12/12/20	13/12/20	14/12/20	15/12/20	16/12/20	17/12/20	18/12/20	19/12/20	20/12/20	21/12/20	22/12/20	23/12/20	24/12/20	25/12/20	26/12/20	27/12/20	28/12/20	29/12/20	30/12/20	31/12/20	01/01/21	02/01/21	03/01/21	04/01/21	05/01/21	06/01/21	07/01/21	08/01/21	09/01/21	10/01/21	11/01/21	12/01/21	13/01/21	14/01/21	15/01/21	16/01/21	17/01/21	18/01/21	19/01/21	20/01/21	21/01/21	22/01/21	23/01/21	24/01/21	25/01/21	26/01/21	27/01/21	28/01/21	29/01/21	30/01/21	31/01/21	01/02/21	02/02/21	03/02/21	04/02/21	05/02/21	06/02/21	07/02/21	08/02/21	09/02/21	10/02/21	11/02/21	12/02/21	13/02/21	14/02/21	15/02/21	16/02/21	17/02/21	18/02/21	19/02/21	20/02/21	21/02/21	22/02/21	23/02/21	24/02/21	25/02/21	26/02/21	27/02/21	28/02/21	29/02/21	01/03/21	02/03/21	03/03/21	04/03/21	05/03/21	06/03/21	07/03/21	08/03/21	09/03/21	10/03/21	11/03/21	12/03/21	13/03/21	14/03/21	15/03/21	16/03/21	17/03/21	18/03/21	19/03/21	20/03/21	21/03/21	22/03/21	23/03/21	24/03/21	25/03/21	26/03/21	27/03/21	28/03/21	29/03/21	30/03/21	31/03/21	01/04/21	02/04/21	03/04/21	04/04/21	05/04/21	06/04/21	07/04/21	08/04/21	09/04/21	10/04/21	11/04/21	12/04/21	13/04/21	14/04/21	15/04/21	16/04/21	17/04/21	18/04/21	19/04/21	20/04/21	21/04/21	22/04/21	23/04/21	24/04/21	25/04/21	26/04/21	27/04/21	28/04/21	29/04/21	30/04/21	01/05/21	02/05/21	03/05/21	04/05/21	05/05/21	06/05/21	07/05/21	08/05/21	09/05/21	10/05/21	11/05/21	12/05/21	13/05/21	14/05/21	15/05/21	16/05/21	17/05/21	18/05/21	19/05/21	20/05/21	21/05/21	22/05/21	23/05/21	24/05/21	25/05/21	26/05/21	27/05/21	28/05/21	29/05/21	30/05/21	31/05/21	01/06/21	02/06/21	03/06/21	04/06/21	05/06/21	06/06/21	07/06/21	08/06/21	09/06/21	10/06/21	11/06/21	12/06/21	13/06/21	14/06/21	15/06/21	16/06/21	17/06/21	18/06/21	19/06/21	20/06/21	21/06/21	22/06/21	23/06/21	24/06/21	25/06/21	26/06/21	27/06/21	28/06/21	29/06/21	30/06/21	01/07/21	02/07/21	03/07/21	04/07/21	05/07/21	06/07/21	07/07/21	08/07/21	09/07/21	10/07/21	11/07/21	12/07/21	13/07/21	14/07/21	15/07/21	16/07/21	17/07/21	18/07/21	19/07/21	20/07/21	21/07/21	22/07/21	23/07/21	24/07/21	25/07/21	26/07/21	27/07/21	28/07/21	29/07/21	30/07/21	31/07/21	01/08/21	02/08/21	03/08/21	04/08/21	05/08/21	06/08/21	07/08/21	08/08/21	09/08/21	10/08/21	11/08/21	12/08/21	13/08/21	14/08/21	15/08/21	16/08/21	17/08/21	18/08/21	19/08/21	20/08/21	21/08/21	22/08/21	23/08/21	24/08/21	25/08/21	26/08/21	27/08/21	28/08/21	29/08/21	30/08/21	31/08/21	01/09/21	02/09/21	03/09/21	04/09/21	05/09/21	06/09/21	07/09/21	08/09/21	09/09/21	10/09/21	11/09/21	12/09/21	13/09/21	14/09/21	15/09/21	16/09/21	17/09/21	18/09/21	19/09/21	20/09/21	21/09/21	22/09/21	23/09/21	24/09/21	25/09/21	26/09/21	27/09/21	28/09/21	29/09/21	30/09/21	01/10/21	02/10/21	03/10/21	04/10/21	05/10/21	06/10/21	07/10/21	08/10/21	09/10/21	10/10/21	11/10/21	12/10/21	13/10/21	14/10/21	15/10/21	16/10/21	17/10/21	18/10/21	19/10/21	20/10/21	21/10/21	22/10/21	23/10/21	24/10/21	25/10/21	26/10/21	27/10/21	28/10/21	29/10/21	30/10/21	31/10/21	01/11/21	02/11/21	03/11/21	04/11/21	05/11/21	06/11/21	07/11/21	08/11/21	09/11/21	10/11/21	11/11/21	12/11/21	13/11/21	14/11/21	15/11/21	16/11/21	17/11/21	18/11/21	19/11/21	20/11/21	21/11/21	22/11/21	23/11/21	24/11/21	25/11/21	26/11/21	27/11/21	28/11/21	29/11/21	30/11/21	01/12/21	02/12/21	03/12/21	04/12/21	05/12/21	06/12/21	07/12/21	08/12/21	09/12/21	10/12/21	11/12/21	12/12/21	13/12/21	14/12/21	15/12/21	16/12/21	17/12/21	18/12/21	19/12/21	20/12/21	21/12/21	22/12/21	23/12/21	24/12/21	25/12/21	26/12/21	27/12/21	28/12/21	29/12/21	30/12/21	31/12/21	01/01/22	02/01/22	03/01/22	04/01/22	05/01/22	06/01/22	07/01/22	08/01/22	09/01/22	10/01/22	11/01/22	12/01/22	13/01/22	14/01/22	15/01/22	16/01/22	17/01/22	18/01/22	19/01/22	20/01/22	21/01/22	22/01/22	23/01/22	24/01/22	25/01/22	26/01/22	27/01/22	28/01/22	29/01/22	30/01/22	31/01/22	01/02/22	02/02/22	03/02/22	04/02/22	05/02/22	06/02/22	07/02/22	08/02/22	09/02/22	10/02/22	11/02/22	12/02/22	13/02/22	14/02/22	15/02/22	16/02/22	17/02/22	18/02/22	19/02/22	20/02/22	21/02/22	22/02/22	23/02/22	24/02/22	25/02/22	26/02/22	27/02/22	28/02/22	29/02/22	01/03/22	02/03/22	03/03/22	04/03/22	05/03/22	06/03/22	07/03/22	08/03/22	09/03/22	10/03/22	11/03/22	12/03/22	13/03/22	14/03/22	15/03/22	16/03/22	17/03/22	18/03/22	19/03/22	20/03/22	21/03/22	22/03/22	23/03/22	24/03/22	25/03/22	26/03/22	27/03/22	28/03/22	29/03/22	30/03/22	31/03/22	01/04/22	02/04/22	03/04/22	04/04/22	05/04/22	06/04/22	07/04/22	08/04/22	09/04/22	10/04/22	11/04/22	12/04/22	13/04/22	14/04/22	15/04/22	16/04/22	17/04/22	18/04/22	19/04/22	20/04/22	21/04/22	22/04/22	23/04/22	24/04/22	25/04/22	26/04/22	27/04/22	28/04/22	29/04/22	30/04/22	01/05/22	02/05/22	03/05/22	04/05/22	05/05/22	06/05/22	07/05/22	08/05/22	09/05/22	10/05/22	11/05/22	12/05/22	13/05/22	14/05/22	15/05/22	16/05/22	17/05/22	18/05/22	19/05/22	20/05/22	21/05/22	22/05/22	23/05/22	24/05/22	25/05/22
------	------	------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------



[illegible]

For CDCE School of Automation &amp; Robotics

For AMET University

Authorized Signatory

Authorized Signatory





# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
(Declared as Deemed to be UNIVERSITY u/s of UGC Act 1956)  
KANATHUR, CHENNAI - 603 112

FINAL YEAR - EEE

## Attendance Register

S.No.	Roll No.	NAME	F 1	A 2	F 3	A 4	F 5	A 6	F 7	A 8	F 9	A 10	F 11	A 12
01	EE 268	ALLWIN RENOLD S	/	/	/	/	/	/	/	/	/	/	/	/
02	EE 270	BASKAR M	/	/	/	/	/	/	/	/	/	/	/	/
03	EE 273	DIVINS SABI S	/	/	/	/	/	/	/	/	/	/	/	/
04	EE 275	JAYA KRISHNAN K	/	/	/	/	/	/	/	/	/	/	/	/
05	EE 276	JAYAKUMAR M	/	/	/	/	/	/	/	/	/	/	/	/
06	EE 278	JOSEPH MELVIN B	/	/	/	/	/	/	/	/	/	/	/	/
07	EE 279	MANIKANDAN N	/	/	/	/	/	/	/	/	/	/	/	/
08	EE 280	NADHA KUMAR G	/	/	/	/	/	/	/	/	/	/	/	/
09	EE 281	NAVIN KUMAR R	/	/	/	/	OD	OD	/	/	/	/	/	/
10	EE 283	RAT KUMAR F	/	/	/	/	OD	OD	/	/	/	/	/	/
11	EE 284	SIVARAMAN U	/	/	/	/	/	/	/	/	/	/	/	/
12	EE 285	SUNDARAPANDIYAN	/	/	/	/	/	/	/	/	/	/	/	/
13	EE 288	SURYA KUMAR A	/	/	/	/	/	/	/	/	/	/	/	/
14	EE 289	VIGNESH K	/	/	/	/	/	/	/	/	/	/	/	/
15	EE 291	YASWANTH S	/	/	a	a	/	/	/	/	/	/	/	/
16	EE 292	GHORAKAVI LAKSHMI PRASANNA KUMAR	/	/	/	/	/	a	a	/	/	a	a	a
17	EE 293	AIITH KUMAR L	/	/	/	/	OD	OD	/	/	/	/	/	/
18	EE 295	MATHAN DEEPU M	/	/	/	/	OD	OD	/	/	/	/	/	/





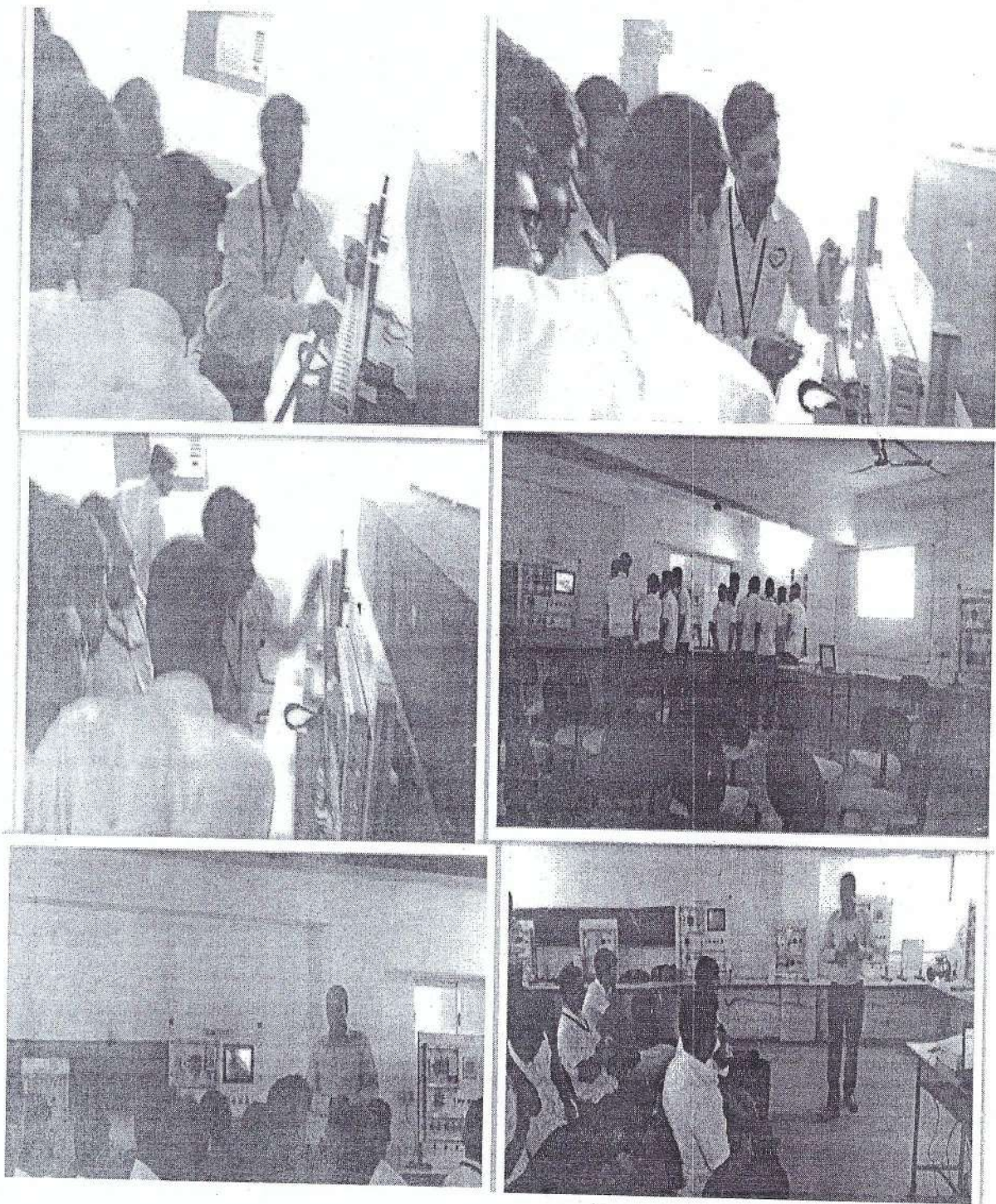
KANATHUR, CHENNAI - 603 112

THIRD YEAR - EEE

[illegible]

Controlled Copy





**Onboard Ship Automation by CDCE School of Automation and Robotics**





# AMET

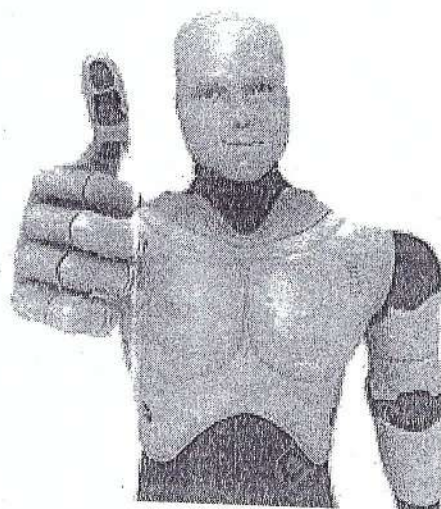
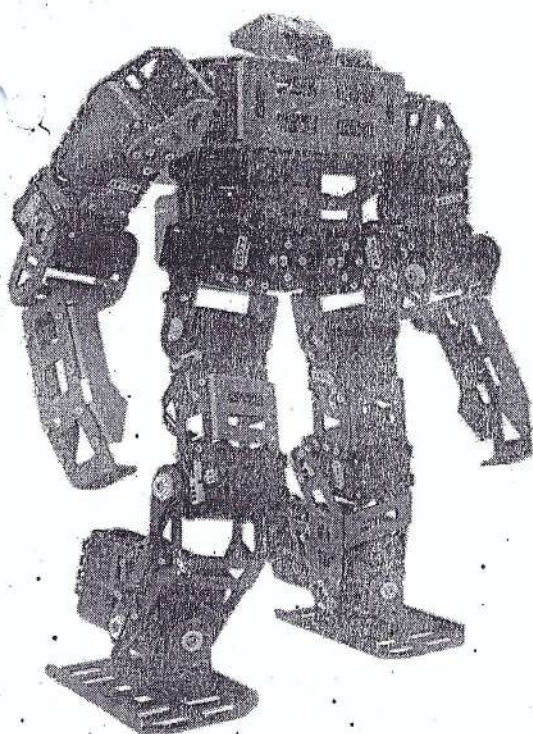
ACADEMY OF MARITIME EDUCATION AND TRAINING  
DEEMED TO BE UNIVERSITY  
(Under Section 3 of UGC Act 1956)

## PROPOSAL FOR VALUE ADDED COURSE

*by*

DEPARTMENT OF ELECTRICAL & ELECTRONICS  
ENGINEERING

*(in association with EPR Labs)*



## **PROPOSAL FOR VALUE ADDED COURSE ON PRODUCT DEVELOPMENT TRAINING AND BASIC ROBOTICS USING MCU**

### **INTRODUCTION:**

To fulfill the expected growth in manpower requirement and the future needs of the engineers in industry more courses are needed at different levels. Private institutions do conduct some courses for training such manpower. However, these are more like coaching classes. True growth of knowledge in this field can come through education programmes conducted by Universities. At present no university in India has started courses in this field. It is hence considered necessary to add new course in robotics and artificial intelligence to impart wider skills needed in this area. With the globalization of the automation industry it has become imperative to update and upgrade these courses so that Indian industry can face the global challenges and maintains its growth in this vital segment.

The value added course on robotics and artificial intelligence, which include direct teaching, assignments and project. Totally six course module available in the value added course on robotics and artificial intelligence. Students who will complete one of these courses modules will be eligible for a certificate. These courses to begin with course module I and will be extended at other semesters as value added course.

The fees for each value added course on product development training and basic robotics using MCU is Rs. 1,500.

It is proposed that the value added course will be for a period of one semester (Wednesday-Thursday) with around 4 hrs teaching per week.

Assignments and projects will be given to the students to calibrate and to provide the certificate.

### **VALUE ADDED COURSE ON MCU AND ROBOTICS**

The purpose of the value added course is to simplify the creation of robotic applications and to do research projects on robotics. The course on robotics is divided into six course modules. Each course has been framed for approximately 30 hours. These 30 hours of course module gives immense knowledge on integration of robotics parts into robots and programming. Students will be able to design humanoid robot, Animal robot, Android robot, Prince Robot and 3D printing. Students are also given extensive hands on training for developing mobile robots. In addition, the



behavior of the robots, study of their communications and specifications (attenuation, power, wiring or radio frequency) is imperative. This course will give a great impact to develop various robots for different applications like space research, robots at operation theatre and to neutralize the bomb at the line of crossing during war time.

### OBJECTIVE OF THE VALUE ADDED COURSE:

The main objective of the value added course is to make students capable to understand the behaviour of different parts of robots. The student's will be able to make his/her desired work using robot and reducing the need of a human to increase the accuracy and speed of the work.

- ❖ To understand the fundamentals of Robotics
- ❖ To learn techniques for programming of robots
- ❖ To understand the behavior of combined system of different engineering modules using artificial intelligence
- ❖ To optimize safety and reliability

### VALUE ADDED COURSE STRUCTURE:

The training course is divided into six modules

Course Module	Course Details	Duration (Hours)
Module I	Product Development Training and Basic Robotics Using MCU	30
Module II	Gadget Development Training using MPU	30
Module III	Advanced Robotic Course - Humanoid Robot Design	30
Module IV	Animal Anatomy Robot Design (dog, cat, reptile etc.,)	30
Module V	Quad copter - Designing and Programming	30
Module VI	Building and Using 3d Printer	30

## **BENEFITS**

- ❖ Study of different types of robots based on configurations and applications.
- ❖ Study of different types of links and joints used in robots
- ❖ Study of components of robots with drive systems
- ❖ Verification of transformation (Position and orientation) with respect to gripper and World coordinate systems
- ❖ Estimation of accuracy, repeatability and resolution
- ❖ Robot programming exercises (Point-to-point and continuous path programming)

## **WHO WILL GET BENEFITS OF THIS VALUE ADDED COURSE?**

The value added course on "Product Development Training and Basic Robotics Using MCU" will be more added advantage with regular academic subjects for second year EEE student. The value added course training will be given for second year EEE students by the experts from the Electronics Platform Research Lab's.

## **INDUSTRIAL AUTOMATION TRAINER**

An MOU is signed between the Department of Electrical and Electronics Engineering, AMET University and Electronics Platform Research Lab's (EPR Labs) on 7 May 2017 in order of facilitate research on design of robots, programming of robots and to operate the robots using Artificial Intelligence.





# CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

## CERTIFICATE OF COMPLETION

*This certifies that*

**S.DHARUN**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





# CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

## CERTIFICATE OF COMPLETION

*This certifies that*

**R. MOHAN RAJ**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

*Mr. Rajasekar Jayakumar*

*Director-CDCE Group*





# CDCE GROUP

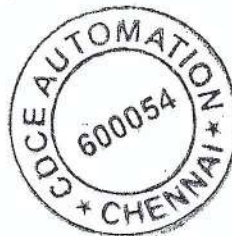
No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

## CERTIFICATE OF COMPLETION

*This certifies that*

**R. MOHAN RAJ**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

*Mr. Rajasekar Jayakumar*  
*Director-CDCE Group*





# CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

## CERTIFICATE OF COMPLETION

*This certifies that*

**R. MOHAN RAJ**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

**Mr. Rajasekar Jayakumar**  
**Director-CDCE Group**





## CDCE GROUP

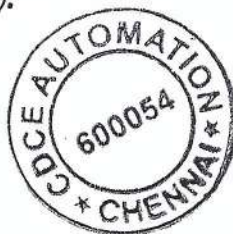
No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**R. NAVEEN RAJ**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**K. GANESH BABU**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**SNAHASISH SAHA**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

-----  
**Mr. Rajasekar Jayakumar**  
**Director-CDCE Group**





# CDCE GROUP

No: 2/2, Nagavalliamman Kōil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

## CERTIFICATE OF COMPLETION

*This certifies that*

**D. PRAVEEN**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**S. VENKATESH**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

*Mr. Rajasekar Jayakumar*

*Director-CDCE Group*





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**D. PRAVEEN**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

*Mr. Rajasekar Jayakumar*

*Director-CDCE Group*





# CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

## CERTIFICATE OF COMPLETION

*This certifies that*

**ANITOSH MONDAL**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajar*

**Mr. Rajasekar Jayakumar**  
**Director-CDCE Group**





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**S. AZARUTHEEN**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajan*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

A. SURYA

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajan*

Mr. Rajasekar Jayakumar  
Director-CDCE Group





# CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

## CERTIFICATE OF COMPLETION

*This certifies that*

**M. BASKAR**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**K. JAYAKRISHNAN**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

*Mr. Rajasekar Jayakumar*

*Director-CDCE Group*





# CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

## CERTIFICATE OF COMPLETION

*This certifies that*

**M. JAYA KUMAR**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajan*

*Mr. Rajasekar Jayakumar*

*Director-CDCE Group*





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**B. JOSEPH MELVIN**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



**Mr. Rajasekar Jayakumar**  
**Director-CDCE Group**





# CDCE GROUP

No: 2/2, Nagavalliamman Koil. 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

## CERTIFICATE OF COMPLETION

*This certifies that*

**N. MANIKANDAN**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajar*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





# CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

## CERTIFICATE OF COMPLETION

*This certifies that*

**G. NANDHA KUMAR**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*

*J. Rajasekar*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**R. NAVIN KUMAR**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**E. RAJKUMAR**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

*Mr. Rajasekar Jayakumar*

*Director-CDCE Group*





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**U. SIVARAMAN**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajan*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.

Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**L.SOUNDARA PANDIYAN**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

*Mr. Rajasekar Jayakumar*

*Director-CDCE Group*





# CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

## CERTIFICATE OF COMPLETION

*This certifies that*

**A. SURYAKUMAR**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**K. VIGNESH**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

S. YAS WANTH

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

Mr. Rajasekar Jayakumar  
Director-CDCE Group





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**L. AJITH KUMAR**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

**Mr. Rajasekar Jayakumar**

**Director-CDCE Group**





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**M. MATHAN DEEPU**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajan*

*Mr. Rajasekar Jayakumar*

*Director-CDCE Group*





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**S. ALLWIN RENOLD**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

*Mr. Rajasekar Jayakumar*

*Director-CDCE Group*





# CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

## CERTIFICATE OF COMPLETION

*This certifies that*

**GIORAKAVI LAKSHMI PRASANNA KUMAR**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajan*

*Mr. Rajasekar Jayakumar*  
*Director-CDCE Group*





## CDCE GROUP

No: 2/2, Nagavalliamman Koil 3<sup>rd</sup> street, Kavarapalayam, Avadi, Chennai-54.  
Mobile - +91 98848 44687/ +91 98848 44687

### CERTIFICATE OF COMPLETION

*This certifies that*

**M. DINESH KUMAR**

*of Electrical & Electronics Engineering from AMET (Deemed to be University) Chennai, has participated and successfully completed the training course on "Industrial Automation" during the period July'18 - March'19 (80 hours).*



*J. Rajasekar*

*Mr. Rajasekar Jayakumar*

*Director-CDCE Group*