CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

Department of Electrical and Electronics Engineering

S.No	Name of the value-added courses (with 30 or more contact hours) offered	Course Code, if any	No. of times offered during the year	Duration of course (in hours)	Number of students enrolled	Number of students who completed the course	Page No
1	Electrical Vehicle Technology	CBIT/EEE/23/1	1	32	49	49	2-64
2	Superconducting Power Systems	CBIT/EEE/23/2	1	31	66	66	65-71
3	MATLAB and Machine Learning for Engineering Applications.	CBIT/EEE/23/3	1	30	60	60	72-86

HEAD
Dept. of EEE, CBIT (A)
Gandipet, Hyderabad-75

ABOUT CBIT (AUTONOMOUS)

Chaitanya Bharathi Institute of Technology is one of the premier Engineering Colleges in the self-financing category in the state of Telangana established in the year 1979. The college offers 12 UG and 10 PG Programmes. The Institute has become Autonomous under UGC w.e.f. 2013-14. UG Programmes are accredited by NBA in the year 1998, 2004, 2008, 2013, 2017, 2022 and Five PG Programmes have been accredited by NBA in 2020. The Institute is accredited by NAAC with CGPA of 3.59 on a four-point scale at 'A++' grade in 2023 for five years. CBIT is ranked in the rank band 150-200 in Engineering Category under National Institutional Ranking Framework (NIRF), Govt. of India, MHRD. The College Campus is spread across 50 acres.

ABOUT EEE DEPARTMENT

CBIT started the Electrical & Electronics Engineering UG program in 1994 and was accredited 5 times i.e. in the years 2004, 2008, 2013, 2017 & 2021 by NBA. The intake was increased from 60 to 120 in the Academic Year 2013-14. The Department started offering a PG course in Power Systems & Power Electronics in 2006 with an intake of 18 and was accredited by NBA in the year 2016 and 2024. The department has received grants worth around ₹90 Lakhs from AICTE/MHRD under RPS, MODROBS, FDP, STTP, etc. The Department is offering consultancy services worth ₹21 Lakhs in collaboration with Foreign Universities in the domain of Renewable Energy Systems. The Department is also certified by ISO 9001:2015. The Department is recognized as Research Centre in 2017 by Osmania University to carry out research for the award of a Ph.D. degree

ABOUT THE COURSE

India is currently experiencing a significant shift towards e-mobility. With the government's support and favourable policies, the Electric Vehicle (EV) market in the country is growing rapidly. The rising demand for clean and sustainable transportation has led to a surge in EV sales. The Indian government has implemented various initiatives to promote EV manufacturing, develop charging infrastructure, and encourage research and development in the sector. To meet the increasing demand for skilled professionals in the EV industry, the "Electric Vehicle Training" has been become need of the hour. This course provides hands-on training, cutting-edge technology, and industry collaborations to equip participants with the knowledge and skills necessary to excel in the evolving EV market. By closing the skill gap and fostering innovation, the Electric Vehicle Training is playing a vital role in shaping the future of e-mobility in India.

Course Duration: "30 hours"

WHO CAN ATTEND?

- UG students, PG Students and Industry personnel

OBJECTIVES OF THE COURSE

- To provide participants with a comprehensive understanding of the technologies driving sustainable energy solutions.
- To comprehend in-depth knowledge of EV systems, proficiency in solar energy applications, and expertise in energy storage systems.
- To empower the participants to contribute actively to the clean energy transition.

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

in Association with
EV RETRON Energies India Pvt Ltd.

A Short Term Training Course
(Value added Course)

on

Electric Vehicle Technology

(Hybrid Mode)

24-04-2024 to 03-05-2024

Organizing by

Department of EEE
Chaitanya Bharathi Institute of Technology
(Autonomous)
Affiliated to Osmania University,
Accredited by NAAC A++ Grade,
Kokapet (V), Gandipet (M), Hyderabad-75,
Telangana State, India.

CHIEF PATRON
Sri. N. Subash
President, CBIT

PATRON
Prof. C. V. Narasimhulu
Principal, CBIT

CONVENER

Prof. M. Balasubba Reddy
Professor & Head, Department of EEE, CBIT

CO-ORDINATORS
Dr. T. Murali Krishna
Associate Professor, Dept. of EEE, CBIT
Dr. B. Sureh Kumar
Associate Professor, Dept. of EEE, CBIT

CO-CORDINATORS
Dr. G. Suresh Babu
Professor, Dept. of EEE, CBIT
Dr. K. Krishnaveni
Professor, Dept. of EEE, CBIT

ORGANIZING COMMITTEE
All Teaching and Non-Teaching staff of EEE Department

ADVISORY COMMITTEE

Prof. P. Ravinder Reddy, Director & Head of R&E Hub
Dr. N. Trivikrama Rao, Director-IQAC
Prof. Suresh Pabboju, Director - AEC & CoE
Prof. M. Sushanth Babu, Director - Academics
Prof. P.V.R. Ravindra Reddy, Director-SAP
Prof. A.D.Sarma, Advisor Research & Development
Prof. U. K. Choudhury, Advisor-Innovation & Incubation
Prof. P.V. Prasad, Controller of Examinations
Dr. N. L. N. Reddy, Advisor - CDC

RESOURCE PERSONS:

- Er. Deepesh Kumar Barla-Co-Founder & M.D., EVERTRON Energies PVT Ltd.
- Dr. U. K. Choudhury, Advisor, I & I, CBIT
- Dr. K. Krishnaveni, Prof., EEED, CBIT
- Dr. G. Suresh Babu, Prof. EEED, CBIT

OUTCOMES OF THIS COURSE

On Successful completion of this course, participants will be able to:

- Develop a comprehensive understanding of EV technology, solar energy systems, and energy storage, enhancing Students proficiency and upskill
- Acquire hands-on experience through practical exercises, enabling Students to incorporate real-world applications and contribute to practical skill development.
- Gain insights into environmental impacts, regulations, and industry trends, empowering students to integrate sustainability principles into their research, and fostering a more environmentally conscious community.

REGISTRATION FEE:

- ₹ 1001-/- for UG & PG students
- ₹ 2001/- for Industry personnel

For Registration & Other Details, Contact:
Dr. T. MURALI KRISHNA, Ph. No: 9866479770
Payment can be done through QR code given below

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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EV RETRON Energies India Pvt Ltd.

A Stort Term Training Course
(Value added Course)
on

Electric Vehicle Technology
(Hybrid Mode)

24-04-2024 to 03-05-2024

Registration Form

1. Name: ……..…….....
2. Branch & Year……..…….....
3. Semester: ……..…….....
4. Address: ……..…….....

……..…….....

……..…….....

5. Mobile No. ……..…….....
6. Email ID: ……..……..…….....

Signature of the Participant

RETRON ENERGIES

TRAINING SESSION ON

ELECTRIC VEHICLE TECHNOLOGY

+91 93910 59446

CONTENTS

About

India is currently experiencing a significant shift towards e-mobility. With the government's support and favorable policies, the electric vehicle (EV) market in the country is growing rapidly.

The rising demand for clean and sustainable transportation has led to a surge in EV sales. The Indian government has implemented various initiatives to promote EV manufacturing, develop charging infrastructure, and encourage research and development in the sector.

To meet the increasing demand for **skilled professionals** in the EV industry, the **"Electric Vehicle Training"** has been established as a leading training hub. The laboratory provides hands-on training, cutting-edge technology, and industry collaborations to equip students with the knowledge and skills necessary to excel in the evolving EV market.

By closing the skill gap and fostering innovation, the **Electric Vehicle Training** is playing a vital role in shaping the future of e-mobility in India.

Together, let's accelerate towards a cleaner and greener transportation landscape.

Learning Objective

The Electric Vehicle (EV) and Energy Storage System course is designed to provide participants with a comprehensive understanding of the technologies driving sustainable energy solutions. By the end of the course, participants will acquire in-depth knowledge of EV systems, proficiency in solar energy applications, and expertise in energy storage systems, empowering them to contribute actively to the clean energy transition and excel in their roles within the rapidly evolving fields of electric mobility and energy storage.

Training Outcomes

Upon completing the Faculty Development Program on EV, Solar, and Energy Storage Systems, participants will:

a. **Deepen Subject Expertise**: Develop a comprehensive understanding of EV technology, solar energy systems, and energy storage, enhancing Students proficiency and upskill.

b. **Integrate Practical Skills:** Acquire hands-on experience through practical exercises, enabling Students to incorporate real-world applications and contribute to practical skill development.

c. **Promote Sustainability Education:** Gain insights into environmental impacts, regulations, and industry trends, empowering students to integrate sustainability principles into their research, and fostering a more environmentally conscious community.

Curriculum

Online Training

Day	Module	Topics	Type of Lecture
Day 1 26th April	**Introduction to Electric Vehicle & Motor Technology**		
	Module 1	Introduction to Electric Vehicle Technology 1. Introduction to Electric Vehicle 2. Types of Electric Vehicle 3. Electric Vehicle Drive train	Theoretical
	Module 2	EV Motor Technology 1. Demonstration of types of Motor 2. Working of Motor 3. Assembly and Testing of Motor	Theoretical
Day 2 27th April	**Electric Vehicle Battery Technology**		
	Module 3	Li-ion Battery Pack 1. Fundamentals of Battery Pack Considerations of Battery Pack 2. Parts of Battery Pack Manufacturing Process 3. Fundamentals of BMS (Battery management system) BMS Technology	Theoretical
	Module 4	Calculation, Simulation and Analysis 1. Pack Voltage and Current Calculation 2. Series and Parallel Battery pack configuration 3. Battery pack Thermal Simulation	Theoretical
Day 3 29th April	**Understanding Energy Storage Systems**		
	Module 5	1. Introduction to Energy Storage System 2. Types of Energy Storage System 3. Introduction and Fundamental of Battery Energy Storage System 4. Applications of ESS	Theoretical
Day 4 30th April	**Case Study**		
	Module 6	1. Case Study of PoPA Residential ESS 2. DFMEA Analysis	Theoretical
Day 5 1st May	**EV Charging Technology & Standards**		
	Module 7	EV Charging technology 1. Introduction on EV Charging technology 2. Types of EV Chargers & Connectors	Theoretical
	Module 8	EV Certifications & Standards 1. AIS 156, 038, 048 2. IEC standards	Theoretical

Curriculum

Time:

Evening 6:00 PM - 7:30 PM

Speakers:

1. Deepesh Kumar- Co-founder & MD, EV Retron Energies
2. Priyanka Kaluvala- Research Analyst, EV Retron Energies
3. Neha Nandargi- Battery Engineer, EV Retron Energies

EV Retron Energies India Pvt Ltd

THANK YOU

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Time for Upskill"

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9391059446

Department of Electrical & Electronics Engineering

Schedule of Value Added Course on Electric Vehicle Technologies
24th April 2024 – 03rd May 2024

	06.00 PM – 8.30 PM
24-04-2024 Wednesday	Basics of AC Electric Drives by **By Dr. G. Suresh Babu, Prof. Dept. of EEE, CBIT,**
25-04-2024 Thursday	Basics of DC Electric Drives by **By Dr. K Krishnaveni, Prof. Dept. of EEE, CBIT,**
26-04-2024 Friday	Introduction to Electric Vehicle Technology, Types, Drive train & Assignment **By Deepesh Kumar, MD. EV Retron Energy India Pvt. Ltd.**
27-04-2024 Saturday	Fundamentals of Battery Pack, Considerations & Parts of Battery Pack Manufacturing Process **By Neha. Battery Engineer, EV Retron Energy India Pvt. Ltd.**
29-04-2024 Monday	Introduction to Energy Storage System, Types, Fundamentals of Battery Energy Storage **By Deepesh Kumar MD. EV Retron Energy India Pvt. Ltd.**
30-04-2024 Tuesday	EV Charging technology, Introduction on EV Charging technology Types of EV Chargers & Connector **By Neha. Battery Engineer, EV Retron Energy India Pvt. Ltd.**
01-05-2024 Wednesday	EV Certification & Standards **By Priyanka. Research Analyst, EV Retron Energy India Pvt. Ltd.**

	9.00 AM-11.00.AM	Break	11.15 AM – 1.15 PM	Lunch Break	02.00 AM – 5.00 PM
02-05-2024 Thursday	EV Emulator & Significance **By Deepesh Kumar. EV Retron Energy India Pvt. Ltd.**		Hands on EV Emulator by **By Deepesh Kumar EV Retron Energy India Pvt. Ltd.**		Hands on EV Emulator **By. Sandeep, EV Retron Energy India Pvt. Ltd.**
03-05-2024 Friday	Performance Analysis of BLDC Motor under Different Load Conditions using EV Emulator by **By Deepesh Kumar. EV Retron Energy India Pvt. Ltd.**		Performance Analysis of BLDC Motor under Different Load Conditions using EV Emulator by **By. Sandeep, EV Retron Energy India Pvt. Ltd.**		Design and connection of cells in a battery and their Charging methods **By Deepesh Kumar. EV Retron Energy India Pvt. Ltd.**

VI-SEM D1

S.No	Name	Section	Sem	Roll Number
1	JARATHI AKSHAYA	D1	VI	160121734008
2	Nandyala Akshaya	D1	VI	160121734011
3	S.Keerthi	D1	VI	160121734015
4	S. Yasaswini	D1	VI	160121734016
5	K V Lalith Kumar Achar	D1	VI	160121734035
6	P Vinay Kumar	D1	VI	160121734051
7	Adithya goud	D1	VI	160121734058
8	Y. Sandeep	D1	VI	160121734062
9	Sindhu vyamsani	D1	VI	160121734303
10	PITLA KARTHIKEYA	D1	VI	160121734314

VI_SEM D2

1	Aishwarya Bura	D2	VI	160121734074
2	GOPU SRUTHI	D2	VI	160121734079
3	Pravalika Kalaveni	D2	VI	160121734083
4	M Chandana	D2	VI	160121734085
5	MOTE SINDHU	D2	VI	160121734086
6	Jhansri P	D2	VI	160121734088
7	Dasari Akhil	D2	VI	160121734099
8	Gugulothu Vijay	D2	VI	160121734106
9	Muppidi Vamsi Krishna	D2	VI	160121734116
10	Solleti Rahul	D2	VI	160121734126
11	V.MARUTHI VENKATA	D2	VI	160121734132
12	K.Sriharsha Vyshnavi	D2	VI	160121734310
13	Qudsiya	D2	VI	160121734313
14	Malay Kasha	D2	VI	160120734094

IV-SEM D1

1	Kotte Haindavi Rao	D1	IV	160122734005
2	Riya kumari	D1	IV	160122734012
3	Krithisha Vuppala	D1	IV	160122734014
4	Bheema Sai Rithvik	D1	IV	160122734019
5	R Nitai charan	D1	IV	160122734047
6	TAMMANNAGARI SAI	D1	IV	160122734050
7	T.Samith	D1	IV	160122734051
8	T.Prabhas	D1	IV	160122734053
9	Veerla Supritha	D1	IV	160122734307

1	Nandini attaluri	D2	IV	160122734073
2	Lavanya Adapa	D2	IV	160122734080
3	Srujana	D2	IV	160122734082
4	Yelagandula vignasri	D2	IV	160122734089
5	Banothu Murali	D2	IV	160122734091
6	Elavala Sai Ankith Red	D2	IV	160122734096
7	G.Sairam	D2	IV	160122734097
8	Gaurav Keesari	D2	IV	160122734098
9	R. Chaitanya Charan	D2	IV	160122734109
10	Sanga Sathwik	D2	IV	160122734112

11	S.SRIKARTHIK REDD`	D2	IV	160122734114
12	S.Santhi Vardhan	D2	IV	160122734115
13	S.GURU KIRAN REDD	D2	IV	160122734118
14	Mohammad Khaja Nas	D2	IV	160122734313

ME-PSPE-II-SEM

1	Khaja inshaal ali khan	D1	IV	160123766009
2	MOHAMMAD AMAANU	D1	IV	160123766010

Department of Electrical & Electronics Engineering

Value Added Course on Electric Vehicle Technology

S.No	Name	Section	Sem	Roll Number	24-04-2024	25-04-2024	26-04-2024	27-04-2024	29-04-2024	30-04-2024	01-05-2024	02-05-2024		03-05-2024	
												FN	AN	FN	AN
1	JARATHI AKSHAYA	D1	VI	160121734008											
2	Nandyala Akshaya	D1	VI	160121734011	A										
3	S.Keerthi	D1	VI	160121734015				A							
4	S. Yasaswini	D1	VI	160121734016						A			A		
5	K.V.Lalith Kumar Achari	D1	VI	160121734035											
6	P Vinay Kumar	D1	VI	160121734051											
7	Adithya goud	D1	VI	160121734058											
8	Sindhu vyamsani	D1	VI	160121734303											
9	PITLA KARTHIKEYA	D1	VI	160121734314											
10	Aishwarya Bura	D2	VI	160121734074											
11	GOPU SRUTHI	D2	VI	160121734079											
12	Pravalika Kalaveni	D2	VI	160121734083											
13	M.Chandana	D2	VI	160121734085											
14	MOTE SINDHU	D2	VI	160121734086											
15	Jhansri P	D2	VI	160121734088											
16	Dasari Akhil	D2	VI	160121734099											
17	Gugulothu Vijay	D2	VI	160121734106											
18	Muppidi Vamsi Krishna	D2	VI	160121734116											
19	Solleti Rahul	D2	VI	160121734126											
20	V.MARUTHI VENKATA TEJA	D2	VI	160121734132											
21	K.Sriharsha Vyshnavi	D2	VI	160121734310											
22	Qudsiya	D2	VI	160121734313											
23	Kotte Haindavi Rao	D1	IV	160122734005											

Value Added Course on Electric Vehicle Technology

S.No	Name	Section	Sem	Roll Number	24-04-2024	25-04-2024	26-04-2024	27-04-2024	29-04-2024	30-04-2024	01-05-2024	02-05-2024		03-05-2024	
												FN	AN	FN	AN
24	Riya kumari	D1	IV	160122734012											
25	Krithisha Vuppala	D1	IV	160122734014											
26	Bheema Sai Rithvik	D1	IV	160122734019											
27	R Nitai charan	D1	IV	160122734047											
28	TAMMANNAGARI SAIGANESH	D1	IV	160122734050											
29	T.Samith	D1	IV	160122734051											
30	T.Prabhas	D1	IV	160122734053											
31	Veerla Supritha	D1	IV	160122734307											
32	Nandini attaluri	D2	IV	160122734073											
33	Lavanya Adapa	D2	IV	160122734080											
34	Srujana	D2	IV	160122734082											
35	Yelagandula vignasri	D2	IV	160122734089											
36	Banothu Murali	D2	IV	160122734091											
37	Elavala Sai Ankith Reddy	D2	IV	160122734096											
38	G.Sairam	D2	IV	160122734097			A	A							
39	Gaurav Keesari	D2	IV	160122734098											
40	R. Chaitanya Charan	D2	IV	160122734109											
41	Sanga Sathwik	D2	IV	160122734112								A			
42	S.SRIKARTHIK REDDY	D2	IV	160122734114											
43	S.Santhi Vardhan	D2	IV	160122734115											
44	S.GURU KIRAN REDDY	D2	IV	160122734118	SGKR	SGKR	SGKR	SGKR	SGKR	SGKR	SGKR	SGKR	SGKR	SGKR	SGKR
45	Mohammad Khaja Nasiruddin	D2	IV	160122734313											
46	Khaja inshaal ali khan	D1	IV	160123766009	A						A				
47	MOHAMMAD AMAANUDDIN	D1	IV	160123766010				A							
48	MALAY KASHA	D2	VI	160123734074			A								
49	Y. Sandeep	D1	VI	160121734042							A				

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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
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COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. JARATHI AKSHAYA bearing

Roll No.: 160123734008 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240301

Hyd
EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Date : 03-05-2024

Certificate ID : REV2D240302

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Mr./Ms. S. KEERTHI bearing

Roll No.: 160121734015 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date :..03-05-2024....

Certificate ID :..REV2D240303.

Hyd
EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Certificate of Completion

This is to certify that

Mr./Ms. S.YASASWINI bearing

Roll No.: 160121734016 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240304

EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

RETRON ENERGIES
Sustainable Energy Storage Solutions

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An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. K·V· LALITH KUMAR ACHARI bearing

Roll No.: 160121734035 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240305

EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. P. VINAY KUMAR bearing

Roll No.: 160121734051 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date :.03-05-2024...

Certificate ID :.REV2D240306..

RETRON ENERGIES INDIA PVT. LTD. Hyd

EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Certificate of Completion

This is to certify that

Mr./Ms. ADITHYA GOUD bearing

Roll No.: 160121734058 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date :..03-05-2024....

Certificate ID :...REV2D240307

EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Certificate of Completion

This is to certify that

Mr./Ms. SINDHU VYAMSANI bearing

Roll No.: 160121734303 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240308

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Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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This is to certify that

Mr./Ms. PITLA KARTHIKEYA bearing

Roll No.: 160121734314 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date :..03-05-2024.....

Certificate ID :..REV2D240309.

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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This is to certify that

Mr./Ms. AISHWARYA BURA bearing

Roll No.: 160121734074 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240310

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
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This is to certify that

Mr./Ms. GOPU SRUTHI bearing

Roll No.: 160121734079 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240311

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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This is to certify that

Mr./Ms. PRAVALIKA KALAVENI bearing

Roll No.: 160121734083 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240312

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EV RETRON ENERGIES
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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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This is to certify that

Mr./Ms. M. CHANDANA bearing

Roll No.: 160121734085 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240313

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
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This is to certify that

Mr./Ms. MOTE SINDHU bearing

Roll No.: 160121734086 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240314

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
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This is to certify that

Mr./Ms. JHANSRI . P bearing

Roll No.: 160121734088 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240315

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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This is to certify that

Mr./Ms. DASARI AKHIL bearing

Roll No.: 160121734099 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240316

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EVRETRON ENERGIES
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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Certificate of Completion

This is to certify that

Mr./Ms. GUGULOTHU VIJAY bearing

Roll No.: 160121734106 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024.**

Date :..03-05-2024..

Certificate ID :..REV2D240317..

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EVRETRON ENERGIES
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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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This is to certify that

Mr./Ms. MUPPIDI VAMSI KRISHNA bearing

Roll No.: 160121734116 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240318

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EVRETRON ENERGIES
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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
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Certificate of Completion

This is to certify that

Mr./Ms. SOLLETI RAHUL bearing

Roll No.: 160121734126 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240319

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
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This is to certify that

Mr./Ms. V. MARUTHI VENKATA TEJA bearing

Roll No.: 160121734132 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240320

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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This is to certify that

Mr./Ms. K. SRIHARSHA VYSHNAVI bearing

Roll No.: 160121734310 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240321

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Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Certificate of Completion

This is to certify that

Mr./Ms. QUDSIYA bearing

Roll No.: 160121734313 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240322

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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This is to certify that

Mr./Ms. KOTTE HAINDAVI RAO bearing

Roll No.: 160122734005 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240323

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Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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This is to certify that

Mr./Ms. RIYA KUMARI bearing

Roll No.: 160122734012 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240324

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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This is to certify that

Mr./Ms. KRITHISHA VUPPALA bearing

Roll No.: 160122734014 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240325

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
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Certificate of Completion

This is to certify that

Mr./Ms. BHEEMA SAI RITHVIK bearing

Roll No.: 160122734019 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240326

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Certificate of Completion

This is to certify that

Mr./Ms. R. NITHAI CHARAN bearing

Roll No.: 160122734047 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

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This is to certify that

Mr./Ms. TAMANNAGARI SAI GANESH bearing

Roll No.: 160122734050 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240328

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Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
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This is to certify that

Mr./Ms. T. SAMITH bearing

Roll No.: 160122734051 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240329

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Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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This is to certify that

Mr./Ms. T. PRABHAS bearing

Roll No.: 160122734053 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240330

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Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
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This is to certify that

Mr./Ms. VEERLA SUPRITHA bearing

Roll No.: 160122734307 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024.**

Date : 03-05-2024

Certificate ID : REV2D240331

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EV RETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Certificate of Completion

This is to certify that

Mr./Ms. NANDINI ATTALURI bearing

Roll No.: 160122734073 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240332

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EV RETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Certificate of Completion

This is to certify that

Mr./Ms. LAVANYA ADAPA bearing

Roll No.: 160122734080 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024.**

Date : 03-05-2024

Certificate ID : REV2D240333

EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Certificate of Completion

This is to certify that

Mr./Ms. SRUJANA bearing

Roll No.: 160122734082 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240334

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Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
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This is to certify that

Mr./Ms. YELAGANDULA VIGNASRI bearing

Roll No.: 160122734089 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D24035

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EV RETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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This is to certify that

Mr./Ms. BANOTHU MURALI bearing

Roll No.: 160122734091 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REVRD240336

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EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. ELAVALA SAI ANKITH REDDY bearing

Roll No.: 160122734096 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2024037

RETRON ENERGIES INDIA P... Hyd

EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

RETRON ENERGIES
Sustainable Energy Storage Solutions

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. R. CHAITANYA CHARAN bearing

Roll No.: 160122734109 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240340

EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Sustainable Energy Storage Solutions

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
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COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. G. SAIRAM bearing

Roll No.: 160122734097 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REVRD240338

Hyd
EV RETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Sustainable Energy Storage Solutions

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. GAURAV KEESARI bearing

Roll No.: 160122734098 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240339

Hyd
EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Sustainable Energy Storage Solutions

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. SANGA SATHWIK bearing

Roll No.: 160122734112 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REVAD240341

Hyd
EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Sustainable Energy Storage Solutions

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. S. SRIKARTHIK REDDY bearing

Roll No.: 160122734114 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date :...03-05-2024...

Certificate ID :...REV2D240342

Hyd
EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

RETRON ENERGIES
Sustainable Energy Storage Solutions

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. S. SANTHI VARDHAN bearing

Roll No.: 160122734115 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D2403143

EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

RETRON ENERGIES
Sustainable Energy Storage Solutions

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. S. GURU KIRAN REDDY bearing

Roll No.: 160122734118 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D24034

Hyd
EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. MOHAMMAD KHAJA NASIRUDDIN bearing

Roll No.: 160122734313 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2024034S

EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Sustainable Energy Storage Solutions

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An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. KHAJA INSHAAL ALI KHAN bearing

Roll No.: 160123766009 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024.**

Date : 03-05-2024

Certificate ID : REV2024O346

Hyd
EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

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Sustainable Energy Storage Solutions

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. MOHAMMAD AMAANUDDIN bearing

Roll No.: 160123766010 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2P240347

Hyd
EVRETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

RETRON ENERGIES
Sustainable Energy Storage Solutions

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. MALAY KASHA bearing

Roll No.: 160120734094 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240348

Hyd
EV RETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

RETRON ENERGIES
Sustainable Energy Storage Solutions

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
An Autonomous Institute | Affiliated to Osmania University

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Certificate of Completion

This is to certify that

Mr./Ms. Y. SANDEEP bearing

Roll No.: 160121734062 has Successfully completed a Value Added course on **Electric Vehicle Technology** organized by **Department of Electrical and Electronics Engineering, CBIT (A)**, in association with **EV Retron Energies India Pvt. Ltd.** conducted during **24/04/2024** to **03/05/2024**.

Date : 03-05-2024

Certificate ID : REV2D240349

EV RETRON ENERGIES
Authorized Signatory

Dr. B. Suresh Kumar	Dr. T. Murali Krishna	Prof. M. Balasubba Reddy	Prof. C. V. Narasimhulu
(Co-ordinator)	(Co-ordinator)	(HOD-EEE)	Principal - CBIT

A REPORT ON

VALUE ADDED COURSE

ON

SUPERCONDUCTING POWER SYSTEMS

From 16th February to 08th March 2024

A.Y 2023-24

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Organized by

Dr. M. Balasubbareddy
HOD EEE/Coordinator, Dept. of EEE
Chaitanya Bharathi Institute of Technology, Hyderabad,
India

Dr. P. Venkata Prasad
Coordinator
Professor, Dept. of EEE
Chaitanya Bharathi Institute of Technology, Hyderabad,
India

Dr. P. Kowstubha
Co-Coordinator
Associate Professor, Dept. of EEE
Chaitanya Bharathi Institute of Technology, Hyderabad,
India

Course Objectives

- Understand Superconductivity: Explore the physics behind superconductivity, including material properties and behavior at cryogenic temperatures.
- Learn Applications in Power Systems: Gain insights into the use of superconductors in power transmission, storage, and grid stability.
- Analyze System Design and Challenges: Examine the design, operation, and practical challenges of superconducting power systems.
- Explore Technological and Economic Implications: Assess the role of SCPS in modern energy systems and their impact on the energy industry.

Course Outcomes

After completing the course, the student will be able to:

- 1. Describe the basic properties of superconductors relevant to electric power applications
- 2. Understand the pros and cons of various applied superconducting materials
- 3. Explain the benefits of superconductors in some power applications
- 4. Understand the design challenges of superconducting power devices
- 5. Understand the basics of cryogenic technology as applied to superconducting power devices

Chief Patron

Sri. N. Subash
President, CBIT

Patron

Prof. C. V. Narasimhulu
Principal, CBIT

Coordinators

Dr. M. Balasubbareddy
Professor & HoD, Dept. of EEE
Dr. P. Venkata Prasad
Professor, Dept. of EEE

Co-coordinator

Dr. P. Kowstubha
Associate Professor, Dept. of EEE

Advisory Committee

Dr. A.D. Sarma
Advisor, R&D
Dr. U.K. Choudhury
Advisor, I&I
Dr. K. Krishnaveni
Professor, Dept. of EEE
Dr. G. Suresh Babu
Professor, Dept. of EEE
Dr. T. Sudhakar Babu
Assoc. Director, R&D

Department of Electrical and Electronics Engineering

SPARC
Scheme for Promotion of Academic and Research Collaboration

In Association With

Indo-US International

A Short term training Course

(Value added Course)
on

Superconducting Power Systems

26th February to 08th March 2024
(Hybrid Mode)

Chaitanya Bharathi Institute of Technology

(Autonomous under UGC)
Affiliated to Osmania University
Kokapet (Village), Gandipet,
Hyderabad – 500075
Telangana State, India.
www.cbit.ac.in

Chaitanya Bharathi Institute of Technology (CBIT)

CBIT is one of the premier Engineering Institutes in India, a pioneer in Telangana State, which is at the idyllic surroundings of Gandipet Lake, Hyderabad. The college offers 12 UG and 10 PG programs. It has been standing as a temple of knowledge for the past 45 years by producing more than 25,000 Eminent and skillful Graduate Engineers, who are successful in their Careers, serving all over the world. CBIT Students are prepared and perfected to secure Placements in reputed MNCs. The Institute has been accredited by NAAC – UGC with 'A++' Grade and several programs are accredited by NBA – AICTE. The UGC has granted Autonomous Status from the Academic Year 2013-14 onwards. Stringent Academic Standards, Industry Compliant Teaching Methodology, Research Projects from Private and Public Sector organizations Industries in Engineering and Management and Consultancy Practice, enabled the Institute to establish its Identity in Technical Education and is ranked as one of the best amongst Private Engineering Colleges in both the Telugu Speaking States.

About Department

CBIT started the Electrical & Electronics Engineering UG program in 1994 and has been accredited 5 times since 2004 by NBA. The recent accreditation in 2021 is for 6 years. The intake was increased from 60 to 120 in the Academic Year 2013-14. The Department started offering a PG course in Power Systems and power Electronics in 2006 with an intake of 18 and was accredited by the NBA in the year 2016. The department has received grants worth around ₹90 lakhs from AICTE under RPS, SPARC, MODROBS, FDP, STTP, etc. The Department is offering consultancy services worth ₹21 lakhs in collaboration with Foreign Universities in Renewable Energy Systems. The Department is also certified by ISO 9001:2015. The Department is recognized as a Research Centre in 2017 by Osmania University to carry out research for the award of Ph.D. degrees.

About Course

This course provides a comprehensive understanding of superconducting power systems (SCPS), covering the fundamental principles of superconductivity, its applications in power systems, and the design and operation of superconducting devices. The program integrates theoretical knowledge with practical insights, preparing students to work on advanced energy technologies in academic, research, or industrial settings.

Course Duration: "30 hours"

WHO CAN ATTEND?

- UG students, PG Students and Industry personnel

Resource Persons

Dr. Sastry Pamidi
Professor and Chair
FAMU-FSU College of Engineering Tallahassee, USA

Dr. M. Balasubbareddy
Professor
Chaitanya Bharathi Institute of Technology, Hyderabad, India

Dr. P. Venkata Prasad
Professor
Chaitanya Bharathi Institute of Technology, Hyderabad, India

Contact Details

Dr.M.Balasubbareddy
Coordinator
Mobile: +91-9885308964
Email Id: balasubbareddy_eee@cbit.ac.in

In Association With

Indo-US International

A Short term training Course

(Value added Course)
On

Superconducting Power Systems

26th February to 08th March 2024
(Hybrid Mode)

Registration Form

1. Name: .....
2. Branch & Year: .....
3. Semester: .....
4. Address: .....
5. Mobile No. .....
6. Email ID: .....

Signature of the Participant

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELCETRONICS ENGINEERING

Indo-US International

A Short term training Course (Value added Course)

On

Superconducting Power Systems

26th February to 08th March 2024

ATTENDANCE SHEET

HEAD
Dept. of EEE, CBIT (A)
Gandipet, Hyderabad-75

Chaitanya Bharathi Institute of Technology (A)

(Affiliated to Osmania University, Hyderabad)

SPARC

In Association with

INDO-US International Short Term Training

(Value added Course)

20th February to 08th March 2024

CERTIFICATE

This is to certify that Mr. / Ms. /. **Bandaru Harika** of **EEE Department , CBIT, Hyderabad** has participated in a MHRD-Sponsored INDO-US International Short Term Training (Value added Course) on *"SUPERCONDUCTING POWER SYSTEMS"* Organized by Department of Electrical and Electronics Engineering during 20th February 2024 to 08th March 2024.

Dr. P.V. Prasad
Coordinator

Dr. M. Balaubbareddy
Coordinator/HOD-EEE, CBIT

Dr. C.V.Narasimhulu
Principal, CBIT

Chaitanya Bharathi Institute of Technology (A)

(Affiliated to Osmania University, Hyderabad)

SPARC

In Association with

INDO-US International Short Term Training

(Value added Course)

20th February to 08th March 2024

CERTIFICATE

This is to certify that Mr. / Ms. /. **Vutukuru Karthik** of **EEE Department , CBIT, Hyderabad** has participated in a MHRD-Sponsored INDO-US International Short Term Training (Value added Course) on *"SUPERCONDUCTING POWER SYSTEMS"* Organized by Department of Electrical and Electronics Engineering during 20th February 2024 to 08th March 2024.

Dr. P.V. Prasad
Coordinator

Dr. M. Balaubbareddy
Coordinator/HOD-EEE, CBIT

Dr. C.V.Narasimhulu
Principal, CBIT

About Course

This course is sponsored by SPARC in association with INDO-US.It provides a comprehensive understanding of superconducting power systems (SCPS), covering the fundamental principles of superconductivity, its applications in power systems, and the design and operation of superconducting devices. The program integrates theoretical knowledge with practical insights, preparing students to work on advanced energy technologies in academic, research, or industrial settings. Total 66 students participated in the value added course.

Course Objectives:

After completing the course, the student will be able to:

1. Describe the basic properties of superconductors relevant to electric power applications
2. Understand the pros and cons of various applied superconducting materials
3. Explain the benefits of superconductors in some power applications

4. Understand the design challenges of superconducting power devices

5. Understand the basics of cryogenic technology as applied to superconducting power devices

6. Understand the basic design features of various superconducting power device demonstrations

7. Understand the applications of superconducting technology in the modern electric power sector

8. Emerging trends in sustainable energy systems, including the use of hydrogen as an energy carrier

Topics Covered:

1. High Temperature Superconducting Materials (HTS)
2. Basic Cryogenic Technology Used in HTS Power Applications
3. Superconducting Power Cables (AC and DC)
4. Superconducting Fault Current Limiters
5. Superconducting Transformers
6. Superconducting Motors and Generators
7. Examples and Case Studies of HTS Power Devices
8. AC Losses in HTS Conductors and Power Devices
9. Measurement Techniques for Characterizing HTS materials and devices
10. The synergy between superconducting technology and hydrogen as an energy carrier.

Career Opportunities

- Research and development in superconducting technologies
- Roles in power grid companies and renewable energy firms
- Advanced roles in cryogenics and materials science industries
- Academia and teaching positions in energy systems and superconductivity

This course equips participants with the theoretical and practical tools needed to excel in the growing field of superconducting power systems.

REFERENCE:

1. Superconductors in the Power Grid: Materials and Applications, edited by Christopher Rey, ISBN: 978-1-78242-029-3.

Department of EEE, CBIT

Value Added Course (VAC) on MATLAB and Machine Learning for Engineering Applications

29th-30th September, 05th -06th & 12th October 2023

Course Content

- Hands-on MATLAB Programming
- Implementation of Teaching Learning-based optimization (TLBO) in MATLAB
- Implementation of Differential evolution (DE) in MATLAB
- Implementation of Cuckoo Search Algorithm (CSA) in MATLAB
- Machine Learning for Engineering Applications

E-Certificate will be provided through email only.

Organizing Committee

Chairperson

Prof. C. V. Narasimhulu

Principal, CBIT

Convener

Dr. M. Balasubbareddy

Professor & HOD/EEE

Coordinators

Dr. M. Balasubbareddy

Professor, Dept. of EEE

Mobile: +91-9885308964

Dr. P. Kowstubha

Associate Professor, Dept. of EEE

Mobile: +91- 9676402000

Dr. N. Venkataphanendrababu

Assistant Professor, Dept. of EEE

Mobile: +91-8096909995

For further details please contact:

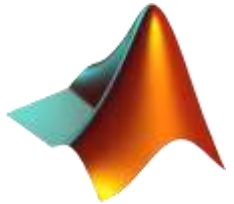
E-mail: balasubbareddy_eee@cbit.ac.in
kowstubha_eee@cbit.ac.in
phanendrababu_eee@cbit.ac.in

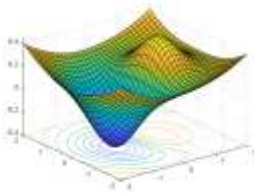
CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
An Autonomous Institute | Affiliated to Osmania University
COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Department of Electrical and Electronics Engineering

Value Added Course (VAC) on MATLAB and Machine Learning for Engineering Applications

29th-30th September, 05th -06th & 12th October 2023





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Hyderabad – 500075
Telangana State, India.
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Chaitanya Bharathi Institute of Technology (CBIT)

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About Department

CBIT started the Electrical & Electronics Engineering UG program in 1994 and was accredited 5 times i.e. in the years 2004, 2008, 2013,2017 & 2021 by NBA. The intake was increased from 60 to 120 in the Academic Year 2013-14. The Department started offering a PG course in Power Systems & Power Electronics in 2006 with an intake of 18 and was accredited by NBA in the year 2016. The department has received grants worth around ₹ 1 crore from AICTE under RPS, SPARC, MODROBS, FDP, STTP, etc. The Department is offering consultancy services worth ₹ 24 lakhs in collaboration with Foreign Universities in the domain of Renewable Energy Systems. The Department is also certified by ISO 9001:2015. The Department is recognized as Research Centre in 2017 by Osmania University to carry out research for the award of a Ph.D. degree.

About Value Added Course (VAC)

Heuristics is a solution strategy by trial-and-error to produce acceptable solutions to a complex problem in a reasonably practical time. The complexity of the problem of interest makes it impossible to search every possible solution or combination, the aim is to find good, feasible solutions in an acceptable. timescale. There is no guarantee that the best solutions can be found, and we even do not know whether an algorithm will work and why if it does work. The idea is that an efficient but practical algorithm that will work most of the time and be able to produce good quality solutions. Among the found quality solutions, it is expected that some of them are nearly optimal, though there is no guarantee for such optimality.

Metaheuristic is an approach method based on a heuristic method that does not rely on the type of the problem. The metaheuristic method can be distinguished into two which are metaheuristic with single-solution based (local search) and metaheuristic based on population (random search). Metaheuristics algorithms provide suitable solutions for the path-finding problem in the IoT environment. Generally, these algorithms are classified into four main groups: evolutionary-based, swarm-based, human-based, and physics-based.

Resource Persons

Resource Persons will be the expert faculty from CBIT, Hyderabad.

EEE department Front View

R&E Hub Top View

Registration Link:

https://forms.gle/MFZLN6ZGmRbffDdk9

Last date for the registration is 27/09/2023.

CBIT,

25/09/2023.

To,

The principal,

CBIT (A), Hyderabad.

Sub: Req.-Approval-VAC- Organizing by EEE- Rgd.

Through-Proper-Channel

Respected Sir,

It is proposed to organize a Value Added Course (VAC) on "**MATLAB and Machine Learning for Engineering Applications**", by the Department of Electrical And Electronics Engineering in CBIT, during **29th-30th September, 05th -06th & 12th October 2023.**

Though this course on emerging tool focuses mainly the students of EEE, the interested students from other departments are also invited to register this course.

We request you permit us to conduct this course, sir. We also request you forward the same to W&BC to upload onto the website.

Thanking you sir,

Forwarded
M. Rama
25/9/23

Forwarded to the Principal.
May be permitted.
25/9/2023

Yours sincerely,

Dr. N Venkataphanendrababu,
Coordinator-VAC,
Assistant Professor,
EEE, CBIT (A), Hyderabad.

Permitted

CBIT

No.CBIT/ /Admn./2023 Dt.26.09.2023

CIRCULAR

It is proposed to organize a Value Added Course (VAC) on "**MATLAB and Machine Learning for Engineering Applications''**, by the Department of Electrical And Electronics Engineering in CBIT, during **29th-30th September, 05th -06th & 12th October 2023.**

All the interested Faculty and Students are directed to attend the event without detrimental to the class work and other important works. Attendance will be recorded for those who attend the event.

Brochure:

https://drive.google.com/file/d/1CWry2VBJVX3PBUdx98Jn3KITWjbiSw1t/view?usp=sharing

Registration:

For any further information contact the program Coordinators of the event, Dr. M Balasubbareddy, Professor & Head, Dr. P. Koustubha, Associate Professor, and Dr. N Venkataphanendrababu, Assistant Professor, EEED, Mobile: 9676402000/8096909995.

Principal

To
All the Advisors, Directors, Associate & Assistant Directors, Heads of the Departments, In-charges of Sections, Librarian, CoE, Head-HR, Asst. PD & PRO, for information and advised to circulate among all the staff and students under their control.

MATLAB and Machine Learning for Engineering Applications

Instruction	3 Hours per week
Duration of Semester End Examination	30 Hours
Credits	3

Course Objectives:
1. To acquire skills in MATLAB coding
2. To acquire the knowledge of Machine learning algorithms
3. To learn the intelligent approaches for the field of electrical engineering

Course Outcomes: After completion of the subject, students will be able to:
1. Understand the various Artificial Intelligent and Meta-heuristic Techniques
2. Classify the techniques according to their method of approach
3. Select the suitable technique for the given power system problem
4. Implement suitable Intelligent technique for the given power system problem
5. Execute any power system planning and operation using Artificial Intelligent Techniques

UNIT-I
Introduction to MATLAB Programming and Optimization: Introducing MATLAB and the MATLAB Working Environment, MATLAB Programming, Basic MATLAB Functions for Linear and Non-Linear Optimization,

UNIT-II
Teaching Learning-based optimization (TLBO): Introduction, Teacher phase and Learner phase of algorithm, modeling the Teacher phase and Learner phases, pseudo code, DE implementation in MATLAB.

UNIT-III
Differential evolution (DE): Introduction, Variants, Choice of Parameters, Implementation, algorithm, pseudo code, DE implementation in MATLAB.

UNIT-IV:
Cuckoo Search Algorithm (CSA): Cuckoo Breeding Behavior, Lévy Flights, Choice of Parameters, Cuckoo Search Algorithm, Variants of Cuckoo Search, pseudo code, DE implementation in MATLAB.

UNIT-V
Machine Learning for Engineering Applications: Applications of heuristic algorithms, economic load dispatch, optimal placement of DGs, Optimal placement of Charging stations, optimal placement of phasor measurement units, optimizing PID controller for DC motor control

Text Books:

1. Yang, X. S. (Ed.). (2017). *Nature-inspired algorithms and applied optimization* (Vol. 744). Springer.
2. Yang, X. S. (2020). *Nature-inspired optimization algorithms*. Academic Press.
3. Lopez, C. (2014). *MATLAB optimization techniques*. Apress.

Suggested Reading:

1. Messac, A. (2015). *Optimization in practice with MATLAB®: for engineering students and professionals*. Cambridge University Press.
2. Sumathi, S., & Kumar, L. A. (2018). *Computational intelligence paradigms for optimization problems using MATLAB®/SIMULINK®*. CRC Press.

DEPARTMENT OF ELECTRICAL and ELECTRONICS ENGINEERING

Value Added Course (VAC) on "MATLAB and Machine Learning for Engineering Applications"
29rd-30th September, 05th -06th & 12th October 2023

Schedule

Day & Date	10:00am-11.30 am	11.30am – 1pm	1pm-2 pm	2.00 pm – 3.30pm	3.30 pm – 5.00pm
Friday 29/09/2023	Inauguration (MBSR)	Introduction to MATLAB (MBSR)	**LUNCH**	MATLAB Programming (MBSR)	Practical Session/Lab (NVPB/PK)
Saturday 30/09/2023	Optimization Techniques and TLBO Algorithm (MBSR)	TLBO implementation in MATLAB (MBSR)		Practical Session/Lab (NVPB/PK)	Practical Session/Lab (NVPB/PK)
Thursday 05/10/2023	DE Algorithm (MBSR)	DE implementation in MATLAB (MBSR)		Practical Session/Lab (NVPB/PK)	Practical Session/Lab (NVPB/PK)
Friday 06/10/2023	CSA Algorithm (MBSR)	CSA implementation in MATLAB (MBSR)		Practical Session/Lab (NVPB/PK)	Practical Session/Lab (NVPB/PK)
Thursday 12/10/2023	Introduction to Machine Learning and Deep Learning (MBSR)	Implementation of Machine learning algorithms (MBSR)		Test & Feedback (MBSR, NVPB, PK)	Valedictory (MBSR, NVPB, PK)

MBSR: Dr. M. Balasubbareddy, **PK**: Dr. P. Kowstubha, **NVPB**: Dr. N. Venkataphanendrababu

Head of the Dept., EEE

VAC Report: MATLAB and Machine Learning for Engineering Applications

Introduction: The VAC titled "MATLAB and Machine Learning for Engineering Applications" was conducted to enhance participants' understanding of Artificial Intelligence (AI) and Meta-heuristic techniques, and their application in solving power system problems. The VAC provided a comprehensive platform for theoretical learning and practical implementation of intelligent techniques using MATLAB.

Workshop Objectives:

1. Understand various Artificial Intelligent and Meta-heuristic Techniques.
2. Classify these techniques according to their method of approach.
3. Select suitable techniques for specific power system problems.
4. Implement appropriate Intelligent techniques for power system issues.
5. Execute power system planning and operation using Artificial Intelligent Techniques.

Workshop Topics Covered:

1. **Introduction to Artificial Intelligence and Meta-heuristic Techniques:**
    - Overview of AI and its relevance to engineering applications.
    - Meta-heuristic algorithms, including Genetic Algorithms (GA), Particle Swarm Optimization (PSO), and Ant Colony Optimization (ACO).
2. **Classification of AI Techniques Based on Approach:**
    - Data-driven methods: Machine Learning algorithms like Neural Networks and Support Vector Machines.
    - Evolutionary techniques: Genetic Algorithms and Differential Evolution.
    - Swarm intelligence techniques: Particle Swarm Optimization and Ant Colony Optimization.
    - Hybrid approaches: Combining two or more techniques for improved results.
3. **Selection of Suitable Techniques for Power System Problems:**
    - Identifying problem characteristics such as non-linearity, uncertainty, and multi-objective requirements.
    - Matching problem requirements with the strengths of AI or Meta-heuristic techniques.
    - Case studies on load forecasting, fault detection, and energy management.
4. **Implementation of Intelligent Techniques in MATLAB:**
    - Step-by-step demonstration of algorithm implementation using MATLAB.
    - Designing and testing Neural Networks for load forecasting.
    - Optimization of power flow using PSO and GA.
5. **Power System Planning and Operations Using AI Techniques:**
    - Application of AI for grid stability and reliability.
    - Examples of AI-driven solutions for renewable energy integration.
    - Simulation of demand response management using AI tools.

Hands-On Sessions: Participants were provided practical exposure to:

- Developing custom MATLAB scripts for AI models.
- Analyzing power system datasets using Machine Learning techniques.
- Optimizing power system operations using Meta-heuristic algorithms.

Key Outcomes:

- Enhanced understanding of AI and Meta-heuristic techniques.
- Ability to classify and select suitable methods for engineering problems.
- Proficiency in implementing AI models in MATLAB for power system applications.
- Practical knowledge of executing power system planning and operations using AI-driven techniques.

Participant Feedback: The workshop received highly positive feedback, with participants appreciating the balance between theory and practical sessions. Many highlighted the clarity of explanations and the relevance of examples to real-world applications.

Conclusion: The "MATLAB and Machine Learning for Engineering Applications" workshop successfully equipped participants with the knowledge and skills to apply AI and Meta-heuristic techniques in power system problems. The hands-on experience ensured that attendees could confidently implement these methods in their respective fields.

Recommendations for Future Workshops:

- Advanced topics such as Deep Learning and Hybrid Optimization techniques.
- Real-time system integration and hardware implementation.
- Extended sessions for more in-depth hands-on practice.

Participation:

The program saw active participation from faculty members, and students. The sessions were interactive, providing a platform for participants to discuss and resolve queries.

List of Participants:

S.No.	Name of the staff	Designation	DEPARTMENT
1.	Dr. M. Balasubba Reddy	Professor	EEE, CBIT
2.	Dr. T.Murali Krishna	Associate Professor	EEE, CBIT
3.	Dr. T.Sudhakar Babu	Associate Professor	EEE, CBIT
4.	Sri. I. Pranav	Assistant Professor	EEE, CBIT
5.	Sri. D.Harrsha	Assistant Professor	EEE, CBIT
6.	Dr. Madhulika Das	Assistant Professor	EEE, CBIT
7.	Dr.Yawer Abbas Khan	Assistant Professor	EEE, CBIT
8.	Sri. D. Sathish	Assistant Professor	EEE, CBIT
9.	Smt. D. Sushma	Assistant Professor	EEE, CBIT

B.E-VII-SEM-D1				
S.No	**Roll Number**	**Name of the Student**	**SEM**	**Section**
1	160120734003	BURA AKSHAYA	VII	EEE-D1
2	160120734004	DHAMMA DIVYA REDDY	VII	EEE-D1
3	160120734006	CHUNDURU GOWTHAMI	VII	EEE-D1
4	160120734007	KANCHAPU JAYA SAI TANMAYI	VII	EEE-D1
5	160120734009	POOSKUR KUNDANA	VII	EEE-D1
6	160120734012	NOUREEN SULTANA	VII	EEE-D1
7	160120734013	NARAYANA POOJA REDDY	VII	EEE-D1
8	160120734015	PUNUMALLI PRAVALLIKA	VII	EEE-D1
9	160120734016	VAVILALA ROHITHA RAGA	VII	EEE-D1
10	160120734019	CHEELA TEJASRI	VII	EEE-D1
11	160120734020	VAISHNAVI SANUGOMMULA	VII	EEE-D1
12	160120734021	GANJI ADWAITH	VII	EEE-D1
13	160120734027	C CHARAN KUMAR	VII	EEE-D1

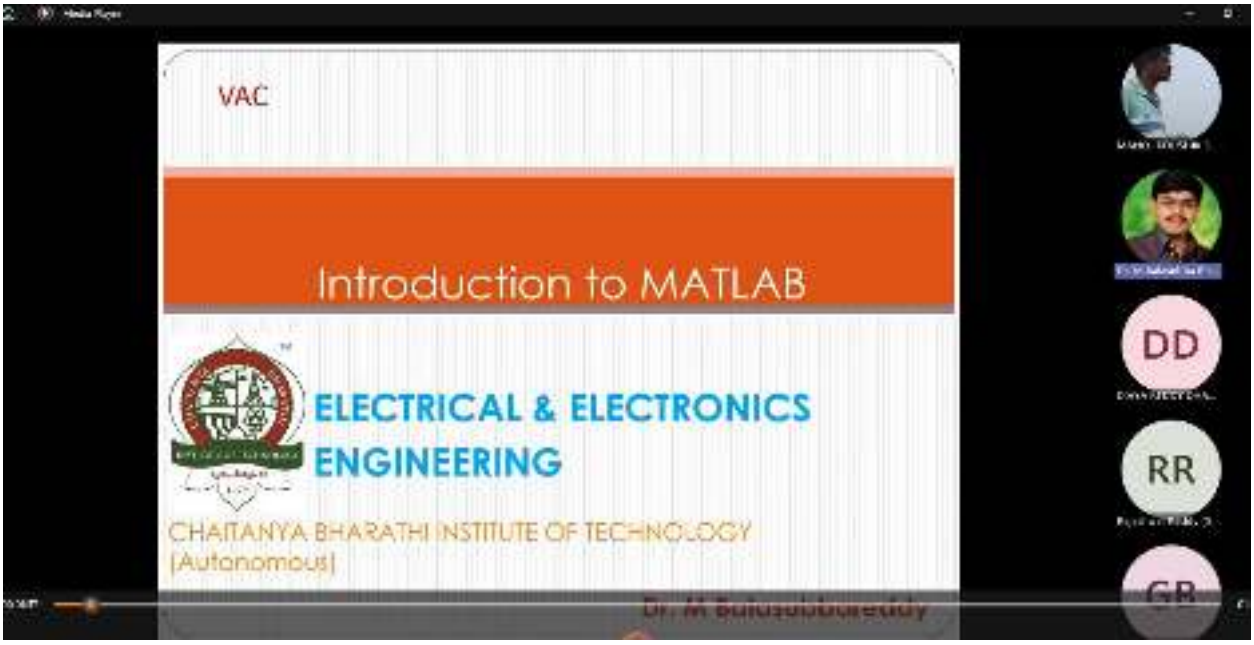
14	160120734028	MOHAMMED FAISAL	VII	EEE-D1
15	160120734029	MD FERDOUES	VII	EEE-D1
16	160120734030	VADDE GANESH	VII	EEE-D1
17	160120734031	GADDE GNANDEEP	VII	EEE-D1
18	160120734032	VUTUKURI GOPICHAND	VII	EEE-D1
19	160120734034	KADARI KOWSHIKK	VII	EEE-D1
20	160120734036	SAKAM MANIKANTA REDDY	VII	EEE-D1
21	160120734041	AMGOTH RAVINDER NAIK	VII	EEE-D1
22	160120734042	GAJWARI SAI KIRAN	VII	EEE-D1
23	160120734047	NATHAM SANTOSH	VII	EEE-D1
24	160120734049	V SHANTAN RAMI REDDY	VII	EEE-D1
25	160120734055	GUNDLA SRIDHAR REDDY	VII	EEE-D1
26	160120734058	KUNDURU VENKATA SAI CHARAN REDDY	VII	EEE-D1
27	160120734303	GANJI ESHWAR	VII	EEE-D1
28	160120734304	BURA NAGASRI	VII	EEE-D1
29	160120734305	BANOTH HARJUN	VII	EEE-D1

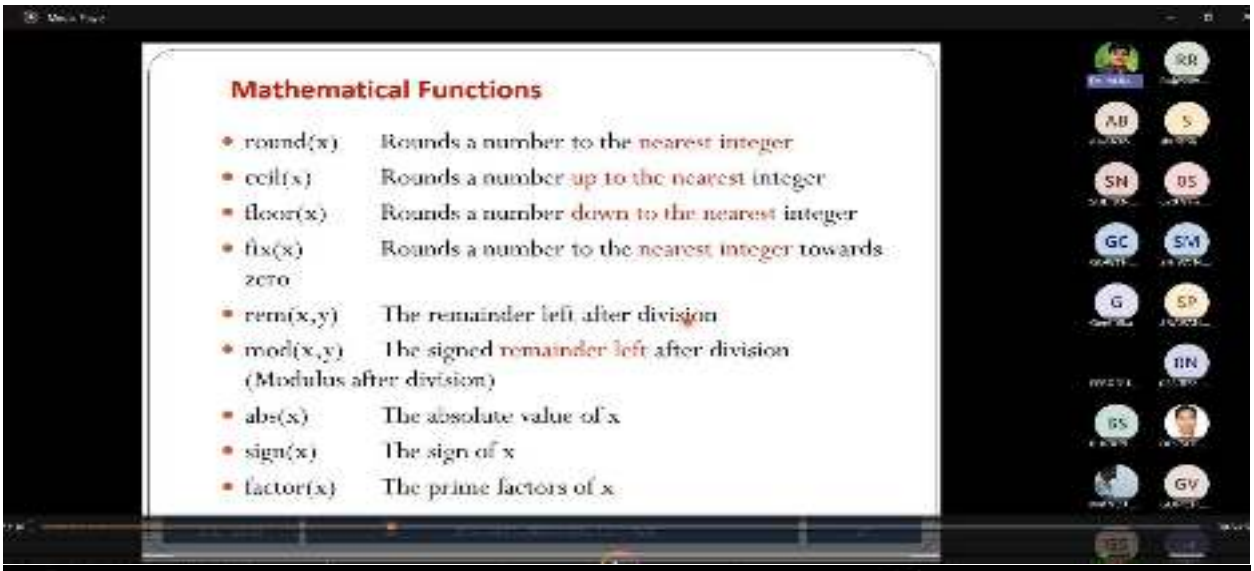
B.E-VII-SEM-D2				
S.No	**Roll Number**	**Name of the Student**	**SEM**	**Section**
1	160120734061	DARAVATH ANUSHA	VII	EEE-D2
2	160120734062	SHAIK AYESHA FARHEEN	VII	EEE-D2
3	160120734063	NENDRALLA BHAVANA	VII	EEE-D2
4	160120734064	THATICHETLA BHUVANA PALINI	VII	EEE-D2
5	160120734068	DANDU NIHARIKA	VII	EEE-D2
6	160120734073	GUJJA RISHITHA	VII	EEE-D2
7	160120734074	NANDIKONDA SAIARUN	VII	EEE-D2
8	160120734076	TEYNAMPET SHREYA	VII	EEE-D2
9	160120734077	GUNDA SREESHMA	VII	EEE-D2
10	160120734080	D VAISHNAVI	VII	EEE-D2

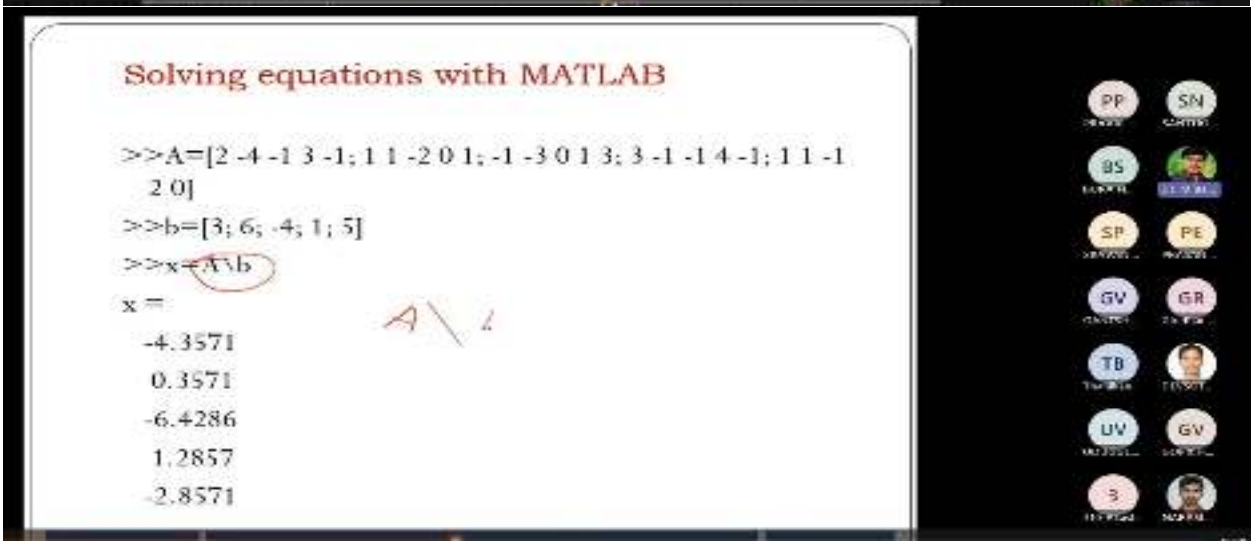
11	160120734090	RASAMADUGU HAREYAANK	VII	EEE-D2
12	160120734091	ANUMALLA HARSHITH	VII	EEE-D2
13	160120734095	M KIRAN KUMAR	VII	EEE-D2
14	160120734097	MADHILESH ERRAMSHETTI	VII	EEE-D2
15	160120734099	CHALASANI MAHESH TEJA	VII	EEE-D2
16	160120734102	VADGURE PAVAN KALYAN	VII	EEE-D2
17	160120734104	PUSULURI PRANAY	VII	EEE-D2
18	160120734106	BASHABOINA RAJU	VII	EEE-D2
19	160120734308	PATTURI SAI PRIYA	VII	EEE-D2
20	160120734310	GANGULA AKASH	VII	EEE-D2
21	160120734311	YADAGIRI AKANKSHA	VII	EEE-D2
22	160120734312	MUZAFFAR NAVEED	VII	EEE-D2

M.E-PSPE			
S.No	**Roll Number**	**Name of the Student**	**Branch**
1	160122766001	NARASIMHULU	M.E-PSPE
2	160122766002	BEEMARI PRANESH	M.E-PSPE
3	160122766003	A IHTESHAM UDDIN AHMED	M.E-PSPE
4	160122766004	MARAPALLY SAI CHARAN	M.E-PSPE
5	160122766005	SUNKARI SRILATHA	M.E-PSPE
6	160122766006	BOLLE SHIRISHA	M.E-PSPE
7	160122766007	DEVSOTH SRINIVAS	M.E-PSPE
8	160122766008	SANGEETHA BACHALA	M.E-PSPE
9	160122766009	ERPULA RANI	M.E-PSPE

Photos:


VAC
Introduction to MATLAB
ELECTRICAL & ELECTRONICS ENGINEERING
CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (Autonomous)
DD
RR
GR


Mathematical Functions
round(x) Rounds a number to the nearest integer
ceil(x) Rounds a number up to the nearest integer
floor(x) Rounds a number down to the nearest integer
fix(x) Rounds a number to the nearest integer towards zero
rem(x,y) The remainder left after division
mod(x,y) The signed remainder left after division (Modulus after division)
abs(x) The absolute value of x
sign(x) The sign of x
factor(x) The prime factors of x


Solving equations with MATLAB
>>A=[2 -4 -1 3 -1; 1 1 -2 0 1; -1 -3 0 1 3; 3 -1 -1 4 -1; 1 1 -1 2 0]
>>b=[3; 6; -4; 1; 5]
>>x=A\b
x =
-4.3571
0.3571
-6.4286
1.2857
-2.8571

2-D Plotting: Basic plots

```
plot(x1, y1, c1, x2, y2, c2, ...)
```

x coordinate of first dot

y coordinate of first dot

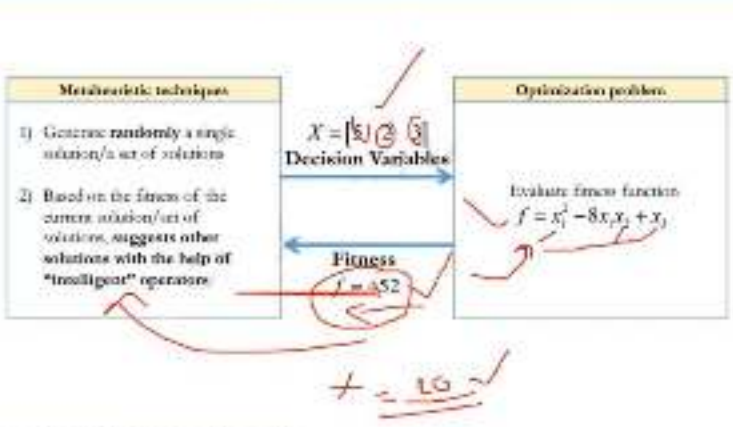
Color & marker of first dot

Symbol	Color	Symbol	Marker	Symbol	Line style
b	blue	.	point	-	solid
g	green	o	circle	:	dotted
r	red	x	x-mark	-.	dashdot
c	cyan	+	plus	--	dashed
m	magenta	*	star	(none)	no line
y	yellow	s	square		
k	black	d	diamond		
		v	triangle (down)		
		^	triangle (up)		
		<	triangle (left)		
		>	triangle (right)		
		p	pentagram		
		h	hexagram		

Example :

```
>>plot(X,Y,'r.')
>> plot(X,Y,'go')
>> plot(X,Y,'y>')
```

Metaheuristic techniques and optimization problem



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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COMMITTED TO RESEARCH, INNOVATION AND EDUCATION 45 years

Value Added Course (VAC) on

MATLAB and Machine Learning for Engineering Applications

29th-30th September, 05th -06th & 12th October 2023

CERTIFICATE

This is to certify that Mr. / Ms. .....of.....

.....has attended an online **Value Added Course (VAC)** on **MATLAB and Machine Learning for Engineering Applications** during 29th-30th September, 05th -06th & 12th October 2023 at **Chaitanya Bharathi Institute of Technology (A),** Hyderabad – 500 075, Telangana,

Coordinator

Principal, CBIT

Registration Form

Value Added Course (VAC) on

'MATLAB and Machine Learning for Engineering Applications'

29rd-30th September, 05th -06th & 12th October 2023

Organized by,

Electrical and Electronics Engineering Department, CBIT (A),

REGISTRATION FORM

1. Applicant Name: (In CAPITALS)		
	First	Last
2. Roll Number:		
3. Year, Section:		
4. Department:		
5. Institution:		
6. Contact Address:		
	State:	PIN:
7. Contact Info:		
	Mobile	Phone / Fax
	Email:	

Declaration by the Applicant:

If selected, I agree to abide by the rules and regulations of the workshop/ training programme and shall attend all the sessions.

Date: Signature of the Applicant

Office Seal

Signature of the Head of the Department/ Institution

Electrical and Electronics Engineering Department

Chaitanya Bharathi Institute of Technology (Autonomous),

Gandipet, Hyderabad, Telangana-500075.