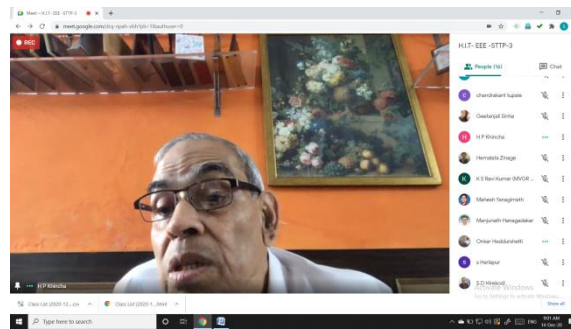
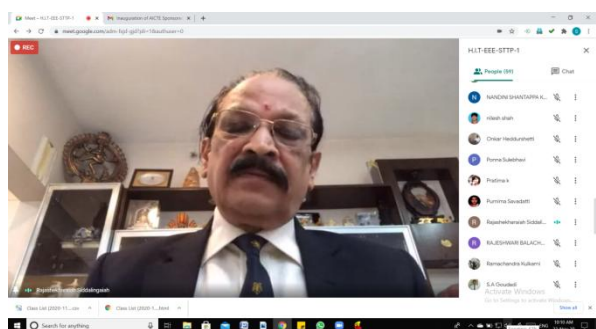
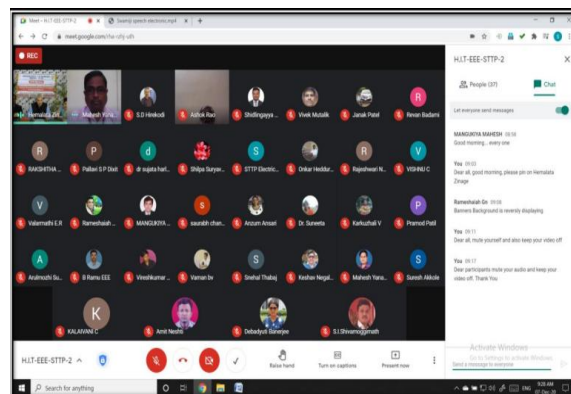
	<p style="text-align: center;"><b>S J P N Trust's</b>  <b>Hirasugar Institute of Technology, Nidasoshi</b>  <i>Inculcating Values, Promoting Prosperity</i>          Approved by AICTE, Recognized by Govt. of Karnataka and Affiliated to VTU Belagavi.  <b>Accredited at 'A' Grade by NAAC</b>  <b>Programmes Accredited by NBA: CSE, ECE, EEE &amp; ME</b></p>	<b>EEE Dept.</b>
		<b>EESSA</b>
		<b>Activity Report</b>
		<b>2020-21 (Odd Sem)</b>

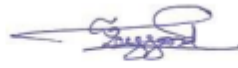
## DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGG.

### “AICTE Sponsored STTP on Battery Management and Control Techniques in EVs”



Department has received a grant of Rs.2,93,333/- from AICTE New Delhi for conducting 6 days short term training program (STTP) to the faculty of AICTE affiliated engineering colleges. The title of the STTP was “Battery Management and Control Techniques in EVs” organized during Phase-1 23<sup>rd</sup> to 28<sup>th</sup> Nov. 2020, Phase-2 7<sup>th</sup> to 12<sup>th</sup> Dec. 2020 and Phase-3 14<sup>th</sup> to 19<sup>th</sup> Dec. 2020. The program coordinator was Dr. Basavaraj V. Madiggond. STTP dealt with a systematic exposition of topics such as environmental impacts and history of modern transportation, EV/HEV configuration and architecture control aspects and strategies employed in EVs/HEVs, Battery management technologies and systems, Drive used for EVs, PE converters for EVs, Safety, Testing, Regulation and standards in EVs etc., Besides, giving detailed discussion on basic principles and practices. The program has provided hands on training on modeling of converters.

The course contents have been taught by eminent experts in the field having adequate teaching and research experience. A program has opened up several avenues for the research enthusiasts more than 250 faculty members, research scholars, working professionals have participated and benefitted from the program.

  
**Dr. B. V. Madiggond**  
**Program Coordinator**  
**HOD, EEE**

## Schedule of the STTP

This STTP program will be conducted in three phases from November 2020 to December 2020.

The schedules for the phases are as indicated below:

Phase 1: 23<sup>rd</sup> – 28<sup>th</sup> Nov 2020

<https://forms.gle/J8VnaD9Wb46EZGxh6>

(Last date for registration: 13<sup>th</sup> Nov 2020)

Phase 2: 7<sup>th</sup> -12<sup>th</sup> Dec 2020

<https://forms.gle/E6FAGKspQTnm4Gk87>

(Last date for registration: 27<sup>th</sup> Nov 2020)

Phase 3: 14<sup>th</sup> -19<sup>th</sup> Dec 2020

<https://forms.gle/xWi1m5Lh5dnHqgsEA>

(Last date for registration: 4<sup>th</sup> Dec 2020)

Participants can join this program by selecting the above mentioned schedules. Intimation to the participant about confirmation of Registration shall be given through mail.

## Important Information for the Participants

- No Registration fee.
- This STTP is only for faculty members of the AICTE approved institutions, research scholars, PG students, participants from Government and Industry. The participants who have attendance 80% and more and also score minimum 60% in the online test will be issued a digital certificate.
- The FDP will be conducted in online mode. Participants willing to participate in this online STTP should arrange the relevant online gadgets viz., laptop/desktop/smart phone with adequate internet connectivity and other audio visual facilities, as required for online training.

### • CHIEF PATRONS:

His Holiness Jagadguru Pancham  
Sri Shivalingeshwar Mahaswamiji  
Siddha Sansthan Math Nidasoshi

Prof. Anil D. Sahasrabudhe  
Chairman, AICTE, New Delhi

### • PATRONS:

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Director, Faculty Development Cell  
AICTE, New Delhi

Shri. G. M. Patil  
Secretary, S.J.P.N. Trust Nidasoshi

### • CONVENER:

Dr. S. C. Kamate  
Principal, HSIT Nidasoshi

### • PROGRAM COORDINATOR:

Dr. Basavaraj. V. Madiggond  
Prof. & HOD, EEE, HSIT Nidasoshi

### • ORGANIZING TEAM:

EEE Department Faculty & Staff

### • CONTACT DETAILS:

Prof. Hemalata R Zinage  
Prof. Mahesh P Yanagimath  
Prof. Onkar B Heddurshetti  
e-mail: [eee.sttp@hsit.ac.in](mailto:eee.sttp@hsit.ac.in)  
mob: 8073512609, 9341449466, 9448420509



AICTE Sponsored  
Online

Short Term Training Program (STTP)  
on

“Battery Management and Control  
Techniques in Electric Vehicles”

Organized by



Department of  
Electrical & Electronics Engineering



S J P N Trust's  
Hirasugar Institute of Technology  
Nidasoshi – 591236, Dist- Belagavi  
Karnataka

Accredited at 'A' Grade by NAAC  
Programmes Accredited By NBA: CSE, ECE, EEE & ME

## About the Institute

### Vision

**"To be a preferred institution in Engineering Education by achieving excellence in teaching and research and to remain as a source of pride for its commitment to holistic development of individual and society"**

### Mission

**"To continuously strive for the overall development of students, educating them in a state of the art infrastructure, by retaining the best practices, people and inspire them to imbibe real time problem solving skills, leadership qualities, human values and societal commitments, so that they emerge as competent professionals"**

With the vision & foresight of His Holiness Shri Pancham Nijalingeshwar Mahaswamiji, the Ninth pontiff of Shri Siddha Sansthan Math, Nidasoshi, Shri Jagadguru Pancham Nijalingeshwar (SJPN) Trust was founded in the year 1984 with the sole purpose of imparting quality education to the needy masses. Under this trust, Hirasugar Institute of Technology, Nidasoshi was established in the year 1996. The management of HSIT is a benevolent body of individuals drawn from various walks of life. Eminent personalities from both industry & academia are overseeing the activities of institution. The college is spread over a sprawling 48.26 acres of greenery & natural surroundings. The college is affiliated to Visvesvaraya Technological University (VTU), Belagavi & approved by All India Council for Technical Education (AICTE), New Delhi & recognized by the Government of Karnataka. The institute offers 4 years BE Degree courses in 1. Electrical & Electronics Engineering 2. Mechanical Engineering 3. Electronics & Communication Engineering 4. Computer Science & Engineering. All the above mentioned courses are accredited by NBA. The Institute is accredited at "A" grade by NAAC. From AY 2020-21 a new program in Civil Engineering has been

started. The institute also runs a Post Graduate Course in Thermal Engineering. The E&E, Mechanical Engineering, E&C, and Chemistry Department have been recognized as Research Centers by V.T.U.

### About the Department

The department of Electrical & Electronics Engineering was established in the year 1996 with the intake of 60. The department is accredited by National Board of Accreditation (NBA). The department is recognized as research centre by VTU, Belagavi. Department has signed MoU with HESCOM Hubballi, PATCO Transformer Industries Nipani, Renutron Power Solutions, Kolhapur and InfySky Belagavi. The Department houses world class Laboratories to satisfy the thirst of budding technocrats. We believe in holistic approach in teaching - learning methods. Dedicated and experienced faculty members provide the best services in uplifting the standards of students.

### About the STTP

Electric vehicles are becoming an inevitable part in larger transportation system. They offer a cleaner mode of transportation by reducing green-house gas emissions and local air pollutants as well as energy dependence without sacrificing performance. This One Week AICTE Sponsored STTP is serving to be a great platform for participants to upgrade their knowledge in the area of "Battery Management and Control Techniques in Electric Vehicles". Where-in participants will get an insight and hands-on exposure to advanced improvements, research avenues and detailed aspects of electric vehicles.

### Content to be covered

- Environmental Impacts and History of Modern transportation. / Climate angle to EV.
- EV/HEV Configuration and Architecture.
- Control Applications to HEV.
- Battery Technology and Future trends.
- Battery Management Systems.
- Energy Management in EVs
- Electric Drives for EV applications.
- SRM Drives for EVs.

- Suitability of BLDC Motor for EV Application
- P. E. Converters for EVs.
- Automotive P. E. Converters for EVs.
- Safety, Testing, Regulation & Standards in EVs.
- Control Techniques for P. E. Converters.
- Modeling and Simulations of EV/HEV.
- Modeling and Simulations of PE Converter for EVs.
- Modeling and Simulations of Batteries & Balancing.
- G2V, V2G Communication
- Chargers for EVs.
- Power Electronics Applications to EV Charging Stations.
- Research Avenues in EVs.

### Resource Persons

#### Key Note Speakers:


**Dr. S. Rajashekharaiya Founder VC, VTU Belagavi**

**Dr. Ashok. Rao Former Head, Network Project, CEDT, IISc Bangalore**

**Dr. H. P. Kincha Former VC, VTU Belagavi & Ex. Chairman, Manipal University Jaipur**

- Dr. H N Nagaraja Pro-VC GE University, Dehradun
- Dr. Ashok Rao, IISc, Bangalore
- Dr L Ashok Kumar PSG Tech
- Dr Bhanu Pratap NIT Kurukshetra
- Mr. Gopal Athani TATA TECHNOLOGIES
- Dr. Abhijeet Kshirsagar IIT Dharwad
- Dr Chandrasekhar P IIT Bhuvaneshwar
- Dr. Ramulu NIT Warangal
- Dr. D S More Walchand College of Engg
- Dr. Ragavan IIT Gandhinagar
- Dr. B. V. Madiggond HSIT Nidasoshi
- Dr. Satish Naik IIT Dharwad
- Dr. Sanjeevkumar R. A. PDA CoE, Gulbarga
- Dr. Suryanarayana K NMAMIT Nitte
- Dr. Pramod Naik AI Edge Innovations
- Mr. Jayaprakash Sabarad, GE Trans, Bangalore
- Dr. K. Selvajyoti, IIITDM, Kancheepuram
- Dr. Dharavath Kishan NIT, Surthkal
- Dr. Sanjeev Nayak L&T Tech. services
- Dr. D. B. Kulkarni, GIT, Belagavi
- Dr. Sreejith S. NIT Silcher



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	Accredited at 'A' Grade by NAAC Programmes Accredited by NBA: CSE, ECE, EEE & ME		AY 2020-21

### SCHEDULE

**“AICTE Sponsored STTP-1 on  
Battery Management and Control Techniques in EVs”  
23<sup>rd</sup> to 28<sup>th</sup> November 2020**

Day 1: 23/11/2020		
Time	Programme	
9.00 am – 10.00 am	Inauguration Key Note Address by Prof. Rajashekhariah, Founder Vice Chancellor, Visvesvaraya Technological University, Belagavi.	
	<b>Overview and History of Electric Vehicles</b>	
10.00 am – 11.30 am	Session 1:	<b>Environmental Impacts and History of Modern transportation.</b> By -Dr. H N Nagaraja Pro-VC GE, University, Dehradun
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>EV/HEV Configuration and Architecture.</b> By - Dr. L. Ashok Kumar, Professor, Dept. of EEE PSG College of Technology, Coimbatore.
1.15 pm -2.15 pm	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>Control Applications to HEV.</b> By-Dr Bhanu Pratap Asst. Professor, Dept. of EEE NIT, Kurukshetra

Day 2: 24/11/2020		
Time	Programme	
	<b>Battery Technology</b>	
10.00 am – 11.30 am	Session 1:	<b>Battery Technology and Future trends.</b> By-Mr. Gopal Athani, Automotive Electrical/Electronic Systems Engineer, Tata Technologies, Pune.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Battery Management Systems.</b> By-Dr. Abhijeet Kshirsagar, Asst. Professor, Dept. of Electrical Engg. IIT, Dharwad
1.15 pm -2.15 pm	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>Energy Management in EVs</b> By-Dr Chandrasekhar P, Asst. Professor, School of Electrical Sciences, IIT, Bhubaneshwar.



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**E&E Engg. Dept.**  
**AICTE-STTP**  
**Schedule**  
**AY 2020-21**

**Day 3: 25/11/2020**

Time	Programme	
	<b>Electric Drives</b>	
10.00 am – 11.30 am	Session 1:	<b>Electric Drives for EV applications.</b> Dr. Ramulu, Asst. Professor, Department of Electrical Engg, NIT, Warangal.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Suitability of BLDC Motor for EV Application</b> By-Dr. Ragavan K Associate Professor, Dept. Electrical Engineering, IIT, Gandhinagar.
1.15 pm -2.15 pm	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>SRM Drives for EVs.</b> By- Dr. D. S. More, Professor, Electrical Engg. Dept. Walchand College of Engg. Sangli.

**Day 4: 26/11/2020**

Time	Programme	
	<b>P. E. Converters and Controls</b>	
10.00 am – 11.30 am	Session 1:	<b>P. E. Converters for EVs.</b> By- Dr. B. V. Madiggond, Professor and Head, Dept.of EEE Hirasugar Institute of Technology, Nidasoshi.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Automotive P. E. Converters for EVs.</b> By- Dr. Satish Naik, Asst. Professor, Department of Electrical Engineering, IIT, Dharwad.
1.15 pm -2.15 pm	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>Control Techniques for P. E. Converters.</b> By- Dr. Suryanarayana K, Professor, EEE Dept. NMAMIT, Nitte.

**Day 5: 27/11/2020**

Time	Programme	
	<b>Modeling and Simulations</b>	
10.00 am – 11.30 am	Session 1:	<b>Modeling and Simulations of EV/HV.</b> By-Dr. Pramod Kumar Nayak, Manager at AIEI Pvt Ltd, Bangalore.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Modeling and Simulations of EV/HV.</b> By-Dr. Pramod Kumar Nayak, Manager at AIEI Pvt Ltd, Bangalore.
1.15 pm -2.15 pm	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>G2V, V2G Communication.</b> By- Dr. Dharavath Kishan, Asst. Professor, Dept. of EEE NIT, Surthkal





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AICTE-STTP

Schedule

AY 2020-21

Day 6: 28/11/2020

Time	Programme	
	Charging of EVs	
10.00 am – 11.30 am	Session 1:	<b>Chargers for EVs.</b> By- Dr. Sanjeev Nayak, Specialist and Project Manager, L&T Tech. Services, Bengaluru.
11.30 am – 11.45 am	Break	
11.45 am – 01.15 pm	Session 2:	<b>Research Avenues in EVs.</b> By- Dr Sreejith S, Asst. Professor, Dept. of EEE, NIT, Silchar
1.15 pm -2.15 pm	Lunch Break	
2.15 pm – 3.45 pm	Session 3:	Test & Valedictory -

  
**H. O. B.**  
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**Schedule**

**AY 2020-21**

**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGG.**

**AICTE Sponsored STTP-1 on "Battery Management and Control Techniques in EVs"**

**List of Candidates who have successfully completed STTP-1**

Sl. No.	Name of the Candidate	Institute/Organization	E-mail ID
1	Smt. A.O.Lalitha Tripura Sundari	S G Balekundri Institute of Technology, Karnataka	lalitha.darbha@sgbit.edu.in
2	Shri. Anandhakumar C	Sri Ramakrishna Institute of Technology, Tamil Nadu	canandhakumar03@gmail.com
3	Dr Sukhwinder Singh Dhillon	Ajay Kumar Garg Engineering College, Uttar Pradesh	dhillonsukhwinder@akgec.ac.in
4	Dr. Amit Dilipkumar Ved	Marwadi University, Gujarat	amit.ved@marwadieducation.edu.in
5	Dr. Irinjila Kranthi Kiran	MVGR College of Engineering, Vizianagaram, Andhra Pradesh	kranthiirinjila@gmail.com
6	Dr. Nilesh V. Shah	Sarvajani College of Engineering & Technology, Surat, Gujarat	nilesh.shah@scet.ac.in
7	Dr. Shipra Bhati	The Oxford College of Engineering Bangalore, Karnataka	shiprabhati@yahoo.com
8	Dr.A.S.S.Murugan	CVR College of Engineering, Telangana	assm17174@gmail.com
9	Dr.T.Suresh Padmanabhan	E.G.S. Pillay Engineering College, Tamil Nadu	drtsp@egspec.org
10	Smt. Gouthami Eragamreddy	G.Narayanamma Institute of Technology Science, Telangana	gouthami.erp@gmail.com
11	Smt. Janhavi M Karekar	Kls Gogte Institute of Technology, Belagavi, Karnataka	vmkarekar@git.edu
12	Shri. Lingaraj Vaidya	B. V. V. S. Polytechnic (Autonomous), Bagalkot, Karnataka	vaidya.lingaraj@gmail.com
13	Mr. Jagdish Dholwani	National Institute of Technology Silchar, Assam	jagdishdholwani@gmail.com
14	Smt. Purnima Savadatti	Dr. AD Shinde College of Engineering And Technology, Badagaon, Maharashtra	purnimamy2013@gmail.com
15	Shri. Rajib Kumar Kar	CVR College of Engineering, Telangana	rajibkrkar@yahoo.co.in
16	Shri. Ramashis Banerjee	NIT Silchar, Assam	ramashisbanerjee@gmail.com
17	Shri. Shivanand Hirekodi	Hirasugar Institute of Technology, Nidasoshi, Karnataka	sdhirekodi.eee@hsit.ac.in
18	Smt. Sunitha N S	Acharya Institute of Technology, Karnataka	sunitha@acharya.ac.in
19	Shri. Uvesh Sipai	Marwadi University, Rajkot, Gujarat	uvesh.sipai@marwadieducation.edu.in

*(B)*  
30/1/21

Program Coordinator  
H. O. D.

Electrical & Electronics Engg  
Hirasugar Institute of Technology  
NIDASOSHI-591236



**AICTE Sponsored One Week  
Online  
Short Term Training Program on**

**"Battery Management and Control Techniques in Electric Vehicles"**

23<sup>rd</sup> to 28<sup>th</sup> November 2020

***Certificate of Participation***

This is to certify that

**Lingaraj Vaidya**

of

**B. V. V. S. Polytechnic (Autonomous ), Bagalkot**  
has successfully attended AICTE Sponsored One Week Online Short Term Training Program  
on **"Battery Management and Control Techniques in Electric Vehicles"**

ORGANIZED BY

**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

**Hirasugar Institute of Technology, Nidasoshi**


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**Programmes Accredited by NBA: CSE, ECE, EEE & ME**

**Dr. B. V. Madiggond**  
**Program Coordinator**  
**HOD, EEE**

**Dr. S. C. Kamate**  
**Principal**




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	<b>Accredited at 'A' Grade by NAAC</b>		
	<b>Programmes Accredited by NBA: CSE, ECE, EEE &amp; ME</b>		

### SCHEDULE

**“AICTE Sponsored STTP-2 on  
Battery Management and Control Techniques in EVs”  
7<sup>th</sup> to 12<sup>th</sup> December 2020**

<b>Day 1: 07/12/2020</b>		
<b>Time</b>	<b>Programme</b>	
9.00 am – 10.00 am	Inauguration Key Note Address by Dr. Ashok Rao, Former Head, CEDT, IISc Bangalore.	
	<b>Overview and History of Electric Vehicles</b>	
10.00 am – 11.30 am	Session 1:	<b>Climate angle to EV</b> By - Dr. Ashok Rao, Former Head, CEDT, IISc, Bangalore.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>EV/HEV Configuration and Architecture.</b> By - Dr. L. Ashok Kumar, Professor, Dept. of EEE PSG College of Technology, Coimbatore.
<b>1.15 pm -2.15 pm</b>	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>Control Applications to HEV.</b> By-Dr Bhanu Pratap Asst. Professor, Dept. of EEE NIT, Kurukshetra

<b>Day 2: 08/12/2020</b>		
<b>Time</b>	<b>Programme</b>	
	<b>Battery Technology</b>	
10.00 am – 11.30 am	Session 1:	<b>Battery Technology and Future trends.</b> By-Mr. Gopal Athani, Automotive Electrical/Electronic Systems Engineer, Tata Technologies, Pune.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Battery Management Systems.</b> By-Dr. Abhijeet Kshirsagar, Asst. Professor, Dept. of Electrical Engg. IIT, Dharwad
<b>1.15 pm -2.15 pm</b>	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>Energy Management in EVs</b> By-Dr Chandrasekhar P, Asst. Professor, School of Electrical Sciences, IIT, Bhubaneshwar.


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			<b>AICTE-STTP</b>
			<b>Schedule</b>
			<b>AY 2020-21</b>

<b>Day 3: 09/12/2020</b>		
<b>Time</b>	<b>Programme</b>	
	<b>Electric Drives</b>	
10.00 am – 11.30 am	Session 1:	<b>Electric Drives for EV applications.</b> By-Dr. Ramulu, Asst. Professor, Department of Electrical Engineering, NIT, Warangal.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Suitability of BLDC Motor for EV Application</b> By-Dr. Ragavan K Associate Professor, Dept. Electrical Engineering, IIT, Gandhinagar.
<b>1.15 pm -2.15 pm</b>	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>SRM Drives for EVs.</b> By- Dr. D. S. More, Professor, Electrical Engg. Dept. Walchand College of Engg. Sangli.

<b>Day 4: 10/12/2020</b>		
<b>Time</b>	<b>Programme</b>	
	<b>P. E. Converters and Controls</b>	
10.00 am – 11.30 am	Session 1:	<b>P. E. Converters for EVs.</b> By- Dr. B. V. Madiggond, Professor and Head, Dept.of EEE Hirasugar Institute of Technology, Nidasoshi.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Automotive P. E. Converters for EVs.</b> By- Dr. Satish Naik, Asst. Professor, Department of Electrical Engineering, IIT, Dharwad.
<b>1.15 pm -2.15 pm</b>	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>Control Techniques for P. E. Converters.</b> By- Dr. Suryanarayana K, Professor, EEE Dept. NMAMIT, Nitte.

<b>Day 5: 11/12/2020</b>		
<b>Time</b>	<b>Programme</b>	
	<b>Modeling and Simulations</b>	
10.00 am – 11.30 am	Session 1:	<b>Modeling and Simulations of PE Converter for EVs.</b> By- Mr. Jayaprakash Sabarad, Engineering Technical Leader, GE Transportation, Bangalore.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Modeling and Simulations of PE Converter for EVs.</b> By- Mr. Jayaprakash Sabarad, Engineering Technical Leader, GE Transportation, Bangalore.
<b>1.15 pm -2.15 pm</b>	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>G2V, V2G Communication</b> By- Dr. Dharavath Kishan, Asst. Professor, Dept. of EEE NIT, Surthkal



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Day 6: 12/12/2020		
Time	Programme	
	<b>Charging of EVs</b>	
10.00 am – 11.30 am	Session 1:	<b>Chargers for EVs.</b> By- Dr. Sanjeev Nayak, Specialist and Project Manager, L&T Tech. Services, Bengaluru
11.30 am – 11.45 am	<b>Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Research Avenues in EVs.</b> By- Dr Sreejith S, Asst. Professor, Dept. of EEE, NIT, Silchar
1.15 pm -2.15 pm	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	Test & Valedictory -

  
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**AICTE Sponsored STTP-2 on "Battery Management and Control Techniques in EVs"**

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Short Term Training Program on**

**"Battery Management and Control Techniques in Electric Vehicles"**

7<sup>th</sup> to 12<sup>th</sup> December 2020

**Certificate of Participation**

This is to certify that

**Dr.B.DEVI VIGHNESHWARI**

of

**THE OXFORD COLLEGE OF ENGINEERING**

has successfully attended AICTE Sponsored One Week Online Short Term Training Program  
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### SCHEDULE

#### “AICTE Sponsored STTP-3 on Battery Management and Control Techniques in EVs” 14<sup>th</sup> to 19<sup>th</sup> December 2020

<b>Day 1: 14/12/2020</b>		
Time	Programme	
9.00 am – 10.00 am	Inauguration Key Note Address by Dr. H. P. Kincha, Former Vice Chancellor, Visvesvaraya Technological University, Belagavi.	
	<b>Overview and History of Electric Vehicles</b>	
10.00 am – 11.30 am	Session 1:	<b>Environmental Impacts and History of Modern transportation.</b> By- Dr. H N Nagaraja Pro-VC GE, University, Dehradun
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>EV/HEV Configuration and Architecture.</b> By- Dr. L. Ashok Kumar, Professor, Dept. of EEE PSG College of Technology, Coimbatore.
1.15 pm -2.15 pm	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>Control Applications to HEV.</b> By-Dr Bhanu Pratap Asst. Professor, Dept. of EEE NIT, Kurukshetra

<b>Day 2: 15/12/2020</b>		
Time	Programme	
	<b>Battery Technology</b>	
10.00 am – 11.30 am	Session 1:	<b>Battery Technology and Future trends.</b> By-Mr. Gopal Athani, Automotive Electrical/Electronic Systems Engineer, Tata Technologies, Pune.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Battery Management Systems.</b> By-Dr. Abhijeet Kshirsagar, Asst. Professor, Dept. of Electrical Engg. IIT, Dharwad
1.15 pm -2.15 pm	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>Energy Management in EVs.</b> By-Dr Chandrasekhar P, Asst. Professor, School of Electrical Sciences, IIT, Bhubaneshwar.



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Day 3: 16/12/2020		
Time	Programme	
	<b>Electric Drives</b>	
10.00 am – 11.30 am	Session 1:	<b>Electric Drives for EV applications.</b> By-Dr. Ramulu, Asst. Professor, Department of Electrical Engineering, NIT, Warangal.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Suitability of BLDC Motor for EV Application.</b> By-Dr. Ragavan K Associate Professor, Dept. Electrical Engineering, IIT, Gandhinagar.
1.15 pm -2.15 pm	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>SRM Drives for EVs.</b> By- Dr. D. S. More, Professor, Electrical Engg. Dept. Walchand College of Engg. Sangli.

Day 4: 17/12/2020		
Time	Programme	
	<b>P. E. Converters and Controls</b>	
10.00 am – 11.30 am	Session 1:	<b>P. E. Converters for EVs.</b> By- Dr. B. V. Madiggond, Professor and Head, Dept.of EEE Hirasugar Institute of Technology, Nidasoshi.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Safety, Testing , Regulation and Standards in EVs.</b> By-Dr. Sanjeevkumar R. A., Asst. Professor, Dept. of EEE PDA College of Engineering, Gulbarga.
1.15 pm -2.15 pm	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>Control Techniques for P. E. Converters.</b> By- Dr. Suryanarayana K, Professor, EEE Dept. NMAMIT, Nitte.

Day 5: 18/12/2020		
Time	Programme	
	<b>Modeling and Simulations</b>	
10.00 am – 11.30 am	Session 1:	<b>Modeling and Simulations of Batteries and Balancing.</b> By-Dr. K. Selvajyoti, Asst. Professor, E&C Engg. Dept. IIITDM, Kancheepuram.
11.30 am – 11.45 am	<b>Tea/Coffee Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Modeling and Simulations of Batteries and Balancing.</b> By-Dr. K. Selvajyoti, Asst. Professor, E&C Engg. Dept. IIITDM, Kancheepuram.
1.15 pm -2.15 pm	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	<b>G2V, V2G Communication.</b> By- Dr. Dharavath Kishan, Asst. Professor, Dept. of EEE NIT, Surthkal.





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Day 6: 19/12/2020		
Time	Programme	
	<b>Charging of EVs</b>	
10.00 am – 11.30 am	Session 1:	EMI/EMC issues in Power Converters used in EVs. By- Ms. Uma Maheswari Y, Manager Technology, Pramura Software Private Limited, Coimbatore.
11.30 am – 11.45 am	<b>Break</b>	
11.45 am – 01.15 pm	Session 2:	<b>Research Avenues in EVs.</b> By- Dr Sreejith S, Asst. Professor, Dept. of EEE, NIT, Silchar
1.15 pm -2.15 pm	<b>Lunch Break</b>	
2.15 pm – 3.45 pm	Session 3:	Test & Valedictory -

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**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGG.**

**AICTE Sponsored STTP-3 on "Battery Management and Control Techniques in EVs"**

**List of Candidates who have successfully completed STTP-3**

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14<sup>th</sup> to 19<sup>th</sup> December 2020

**Certificate of Participation**

This is to certify that

**MADHUSUDHAN S**

of

**ACHARYA INSTITUTE OF TECHNOLOGY**

has successfully attended AICTE Sponsored One Week Online Short Term Training Program  
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