



G. NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE

(For Women) (AUTONOMOUS)


Shaikpet, Hyderabad – 500104

Faculty Development Program on “Competency Development Program on Electric and Hybrid Vehicle Engineering”

Conducted from 21<sup>st</sup> June 2021 to 26<sup>th</sup> June 2021

| S.No | Name of the document   | Status |
|------|--|--------|
| 1.   | Proposal by the Coordinator/Convenor to Principal along with budget, and permission for the venue. | Yes    |
| 2.   | Invitation to the resource person  | Yes    |
| 3.   | Acceptance along with the bio-data   | Yes    |
| 4.   | Poster/brochure/Banner (Not photo)   | Yes    |
| 5.   | Programme schedule   | Yes    |
| 6.   | Circular   | Yes    |
| 7.   | Registration/Attendance of the participants  | Yes    |
| 8.   | Certificates (sample)  | Yes    |
| 9.   | All participants filled Feedback, analysis – action  | Yes    |
| 10.  | Resource person filled Feedback – plan of action   | NA     |
| 11.  | One page photos with atleast 6 with description as per the format                                  | NA     |
| 12.  | Budget utilisation sheet   | NA     |
| 13.  | Press note/Newspaper publication   | NA     |
| 14.  | Single page report as per the format   | Yes    |

  
Workshop Coordinator

  
PRINCIPAL  
G. Narayanamma Institute of  
Technology & Science (for women)  
(AUTONOMOUS)  
Shaikpet, Hyderabad - 500 104.

  
Dept HOD



Gouthami Reddy &lt;gouthami.erp@gmail.com&gt;

**Electric Vehicle Training Proposal - Reg**

2 messages

**HARITHA TECHLOGIX** <admin@harithatechlogix.com>

19 May 2021 at 13:05

To: Gouthami Reddy &lt;gouthami.erp@gmail.com&gt;

Cc: Aravind Durai &lt;aravind3575@gmail.com&gt;

Dear Sir,

Please find the training proposal attached herewith.

The following program is suitable for 3rd and final year students as it covers basics to intermediate level of course content.

Feel free to reach us for any clarification.

Thanks &amp; Regards,

Team Haritha Techlogix

Regd.Office: No.1152C, EVK Thottam,

Mummoorthi Nagar,

Tiruppur – 641602, Tamilnadu

Phone: +91 90031 52737 / +91 9786196955

Email Id: admin@harithatechlogix.com

<http://www.harithatechlogix.com/> **Training\_Content\_Narayanamma.pdf**  
394K**Gouthami Reddy** <gouthami.erp@gmail.com>

19 May 2021 at 15:14

To: nomula mallareddy &lt;nomula.nomula@gmail.com&gt;

[Quoted text hidden]

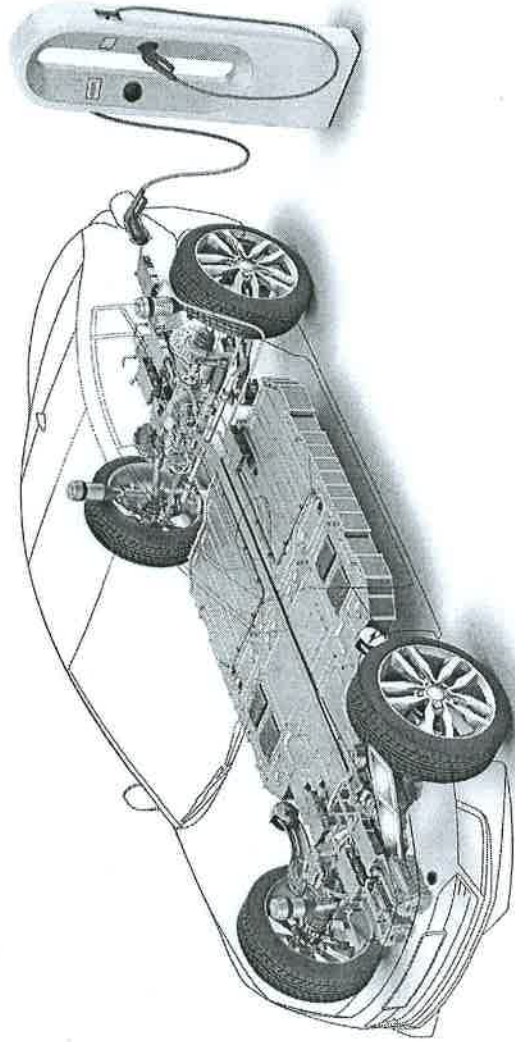
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With regards,

Gouthami E  
Asst Prof.  
G.N.I.T.S.  
Hyderabad **Training\_Content\_Narayanamma.pdf**  
394K  
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Shaikpet, Hyderabad - 500 104.

## Six Days Online Competency Development Programme on

### Electric and Hybrid Vehicle Engineering – Level I



#### PROGRAM DATES:

21-26 June 2021 – Monday to Saturday  
3:00 Pm to 5:00 Pm

#### MODE OF DELIVERY:

Instructor Led Online Live Training Via Microsoft Teams  
(21st to 26th June 2021)

#### COURSE CONTENTS

- Basic Components and Architectures
- Selection of E – motors
- Motor Control Technology for Traction applications
- Power Electronics Technology for Electric & hybrid vehicle applications
- Batteries for Electric & Hybrid Vehicle System Application
- Battery Management Systems
- EV Charging Technology & Infrastructure
- Safety, Testing, Regulations, and Standards
- Powertrain Sizing Hand calculations
- Modeling and Simulation of Electric & hybrid vehicle's

#### WHO SHOULD ATTEND ?

UG, PG Students of EEE, ECE, Mechanical, Automobile , Research Scholars, Faculty Members.

#### RESOURCE PERSON :

**Mr. Prasanthkumar Palani**  
Senior Automotive Homologation Engineer  
Haritha Techlogix, Tamilnadu

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## Jointly organized by

Department of Electrical & Electronics Engineering  
G. Narayanamma Institute of Technology & Science (For Women) (Autonomous) &  
Haritha Techlogix, Tamilnadu



### ABOUT THE INSTITUTE

G. Narayanamma Institute of Technology & Science, a leading Engineering college in Hyderabad for women, was founded by late Sri G. Pulla Reddy garu in 1997, with an objective of providing excellent learning facilities for women to pursue education in Engineering since two decades. The aim is to promote Technical Education among women to enhance and build-up a new generation of thinkers, innovators and planners in the realms of Science and Technology. GNITS received UGC autonomous status for 10 years from 2018 and is affiliated to Jawaharlal Nehru Technological University (JNTU-H), Hyderabad. It is approved by All India Council for Technical Education (AICTE), accredited by NAAC & NBA (AICTE).

### ABOUT THE ELECTRICAL AND ELECTRONICS DEPARTMENT

The Department of Electrical & Electronics Engineering was established and moulded in 1997 keeping in view, the broad objectives of technical education in general and specific needs of Power Engineers in particular. The Department has been accredited by Institution of Engineers in 2005. The Department has qualified & experienced faculty and adequate & well-furnished laboratories to cater to the needs of the students as per the university norms & curriculum. A centre called 'RENEWABLE ENERGY CLUB' under the aegis of Ministry of Renewable Energy Sources was started in Aug. 2006. The Department is responsible for Electrical maintenance of the entire Institution & also for the manning & operation of 750KVA Diesel Power House.

### ABOUT HARITHA TECHLOGIX:

Haritha Techlogix is an engineering and services organization supporting automotive vehicle and component manufacturers in the process of getting regulatory certifications from the testing agencies in India. In addition, our technical academy provides various skill development trainings for academic and industrial professionals in the field of automotive engineering, especially in the growing fields like electric and autonomous mobility in cooperation with certification agencies like ASDC (Automotive Skill Development Council)

### Faculty Program Coordinators :

Dr.N.Malla Reddy, Professor, HOD-EEE

Mrs. Gouthami Eragamreddy, Asst. Prof, EEE

Mr.Sai Niranjan Kumar, Asst.Prof., EEE

Mr.V.Badri Ramakrishnan, Asst.Prof. EEE

Mobile: 90306984921/ 9948883800 | Mail: eegnitsfdp2021@gmail.com

### Industry Program Co-ordinators :

Mr. Aravind Muruganand – Training & Development – Haritha Techlogix

### For any queries:

Email: [admin@harithatechlogix.com](mailto:admin@harithatechlogix.com)

Phone: +91 90031 52737 | 978619 6955

**FOR MORE INFORMATION & SELF REGISTRATION CLICK THE LINK BELOW:**

<https://rzp.io/1/evhtgnits>

### Training Fee Details:

590 INR (Incl GST) for participants from GNITS, Hyderabad

799 INR (Incl GST) For Participants from other Institutions.

OFFICIAL

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Shaikpet, Hyderabad - 500 104.



Gouthami Reddy &lt;gouthami.erp@gmail.com&gt;

---

**Joining Link - Electric and Hybrid Vehicle Training**

2 messages

**HARITHA TECHLOGIX** <admin@harithatechlogix.com>

21 June 2021 at 10:16

Cc: PRASANTH KUMAR P &lt;prasanthkumarp94@gmail.com&gt;, Aravind Durai &lt;aravind3575@gmail.com&gt;

Bcc: gouthami.erp@gmail.com

Dear Participants,

Please find the joining link below for the training session of all the six days.

Timing - 3:00 Pm to 5 Pm | Dates : 21 - 26 June 2021 | Monday to Saturday

[https://teams.microsoft.com/join/19%3ameeting\\_YWQwMzl3ZjQtNmViZS00OWY5LWJkZWltNzhjODUxY2Q2NTA5%40thread.v2/0?context=%7b%22Tid%22%3a%22404909d1-cac9-43b9-855e-126d50daf5cf%22%2c%22Oid%22%3a%22fc860ef9-7b56-4197-900c-cec40eccfab7%22%7d](https://teams.microsoft.com/join/19%3ameeting_YWQwMzl3ZjQtNmViZS00OWY5LWJkZWltNzhjODUxY2Q2NTA5%40thread.v2/0?context=%7b%22Tid%22%3a%22404909d1-cac9-43b9-855e-126d50daf5cf%22%2c%22Oid%22%3a%22fc860ef9-7b56-4197-900c-cec40eccfab7%22%7d)

Thanks &amp; Regards,

Team Haritha Techlogix

Regd.Office: No.1152C, EVK Thottam,

Mummoorthi Nagar,

Tiruppur – 641602, Tamilnadu

Phone: +91 90031 52737 / +91 9786196955

Email Id: admin@harithatechlogix.com

<http://www.harithatechlogix.com/>

---

**Gouthami Reddy** <gouthami.erp@gmail.com>

21 June 2021 at 10:34

To: "P.SAI NIRANJAN KUMAR" &lt;niranjan.merits@gmail.com&gt;

[Quoted text hidden]

With regards,

Gouthami E  
Asst Prof.  
G.N.I.T.S.  
Hyderabad

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**G. Narayanamma Institute of**  
**Technology & Science (for women)**  
**(AUTONOMOUS)**  
**Shaikpet, Hyderabad - 500 104.**

|  |                  |
|--|------------------|
| GNITS/EEE/F-21.2/2020-21   | Dept: EEE        |
| Sub: Competency development Programs on "Electric & Hybrid Vehicle Engineering" for M.Tech, B.Tech Students & Faculty of EEE | Date: 18-06-2021 |

## Circular

All the M.Tech I & II Year, B.Tech 3<sup>rd</sup> & 4<sup>th</sup> year students and faculty of EEE are hereby informed that there is Competency Development Programs on "Electric & Hybrid Vehicle Engineering" through online using Microsoft teams. The students are informed to get registered for the above 6 day program.

Date: 21-06-2021 to 26-06-2021

Speaker: Mr.Prasanth Kumar, CTO, Haritha Techlogix Pvt Ltd.

Note: Join WhatsApp link for updates:

<https://chat.whatsapp.com/ELeVJrMQwh818L0iiwRi7d> Online Link will be posted before the meeting starts

*M. Manjula Reddy*  
HOD-EEE  
18/6/21

*18/6/21*  
PRINCIPAL

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G. Narayanamma Institute of Technology and Sciences  
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Department of Electrical and Electronics Engineering

Six Day Competency Development Programme on

# ELECTRIC AND HYBRID VEHICLE ENGINEERING

Instructor Led Online Live Programme

(21<sup>st</sup> to 26<sup>th</sup> June 2021)

## Program Schedule

| <b>Inauguration: 21-06-2021</b>   |   |  |
|-----------------------------------|---|--|
| <b>Timing: 2:30 PM to 3:00 PM</b> |   |  |
| <b>Day/ Session</b>               | <b>Session-I 3:00 Pm to 4:00 PM</b>   | <b>Session-II 4:00 PM to 5:00 PM</b>   |
| 21/06/2021                        | Basic Components and Architectures  | Selection of E - motors  |
| 22/06/2021                        | Motor Control Technology for Traction applications                          | Power Electronics Technology for Electric & hybrid vehicle applications                        |
| 23/06/2021                        | Batteries for Electric & Hybrid Vehicle System Application                  | Battery Management Systems   |
| 24/06/2021                        | EV Charging Technology & Infrastructure                                     | Safety, Testing, Regulations, and Standards  |
| 25/06/2021                        | Hands-on activities: Powertrain Sizing                                      | Hands-on activities: Powertrain Sizing (2:30 PM to 5:00PM)                                     |
| 26/06/2021                        | Hands-on activities - Modeling and Simulation of electric powertrain system | Hands-on activities: Modeling and Simulation of electric powertrain system (2:30 PM to 5:00PM) |

**Note:**Join WhatsApp link for updates: <https://chat.whatsapp.com/ELeVJfMQwh818L0iiwR1zd>

Online Link will be posted before the meeting starts.

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Mrs.E.Gouthami, Asst. Prof., EEE  
Mr.P.Sai Niranjan Kumar, Asst.Prof. EEE

**Coordinators**

Dr. N. Malla Reddy  
**HOD-EEE**

## 6 Day Competency Development Programme on

### “Electric and Hybrid Vehicle Engineering”

#### Instructor Led Online Live Programme

#### Who can attend?


- Student from any mechanical, electrical, electronics and automobile engineering.

#### Detailed Course Content:

The course curriculum is divided into 10 modules. Assessment on every day of training will be conducted for certification

#### Course Summary:

1. Basic Components and Architectures
2. Selection of E – motors
3. Motor Control Technology for Traction applications
4. Power Electronics Technology for Electric & hybrid vehicle applications
5. Batteries for Electric & Hybrid Vehicle System Application
6. Battery Management Systems
7. EV Charging Technology & Infrastructure
8. Safety, Testing, Regulations, and Standards
9. Powertrain Sizing Hand calculations
10. Modeling and Simulation of Electric & hybrid vehicle's

  
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## Competency Improvement Programme on

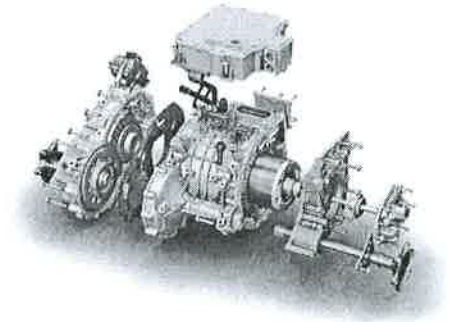
### Electric and Hybrid Vehicle Engineering

#### Training Modules

##### DAY 1

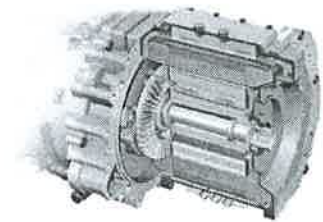
##### Basic Components and Architectures – 1Hr

- Basic electric, hybrid Vehicle Architecture
- IC Engine vs. E-Motor – Operating Characteristics
- Pure electric Vs Hybrid Vehicle characteristics & Design Considerations



##### Selection of E – motors – 1Hr

- BLDC & PMSM drives
- Design of Induction motor for automotive application
- SynR drives & applications



##### DAY 2

##### Motor Control Technology for Traction applications – 1 Hr

- Understand the motor control strategies for EV's & HEV's applications
- Algorithm development for optimal motor control

##### Power Electronics Technology for Electric & hybrid vehicle applications – 1 Hr

- Inverter & Converter Technologies for electric and hybrid vehicle applications

  
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**Day 3****Batteries for Electric & Hybrid Vehicle System Application – 1 Hr**

- Modern Battery Technologies
- Lithium-Ion (Li-ion) Based Technologies – A Detailed Review
  - Cell Balancing: Active versus passive, strategies
  - Sensing Requirements
  - Cell/module level: cell voltage, cell/module temperature, (humidity, smoke, air/fluid flow)
  - Pack level: current, pre-charge temperature, bus voltage, pack voltage, isolation
- Battery selection & sizing for Electric vehicle applications
- Battery pack design considerations for different vehicle classes

**Battery Management Systems – 1Hr**

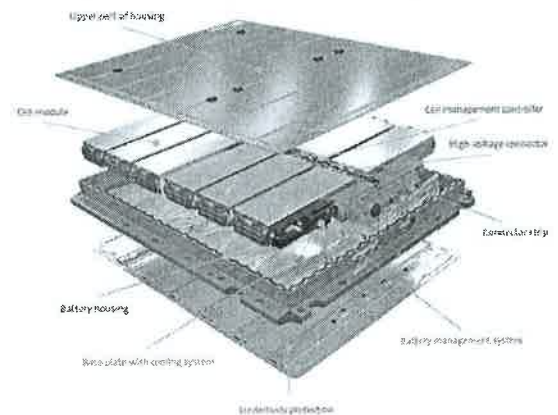
- BMS selection & Sizing


**Battery Management (BMS) & Charging**

- Battery State Detection
- Safety & Monitoring
- Cell Balancing & Thermal Management.

**Control Requirements:**

- SOC Estimation & SOH
- Significance and challenges of Estimation Methods



  
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## Day 4

### EV Charging Technology & Infrastructure – 1 Hr

- Types of EV Charging
- Design of charging systems for various power requirements
- Communication between charger and vehicle
- Understand Circuitry layout & functionality of AC & DC charging systems




### Safety, Testing, Regulations, and Standards – 1 Hr

- Vehicle and component level testing & Standards for electric and hybrid vehicle's
- Understand special considerations for battery pack and other high voltage component testing.

## Day 5 – Hands-on activities – 2.5 Hrs

### Powertrain Sizing

- Understanding sizing Calculations of motor, Inverter and battery systems
- Students will be preparing calculation sheets for entire powertrain sizing as batch wise.
- Calculations based on pre-defined vehicle specifications for understanding the entire physics behind an electric vehicle.
- Perform thermal system calculations with the instructor in the live session.

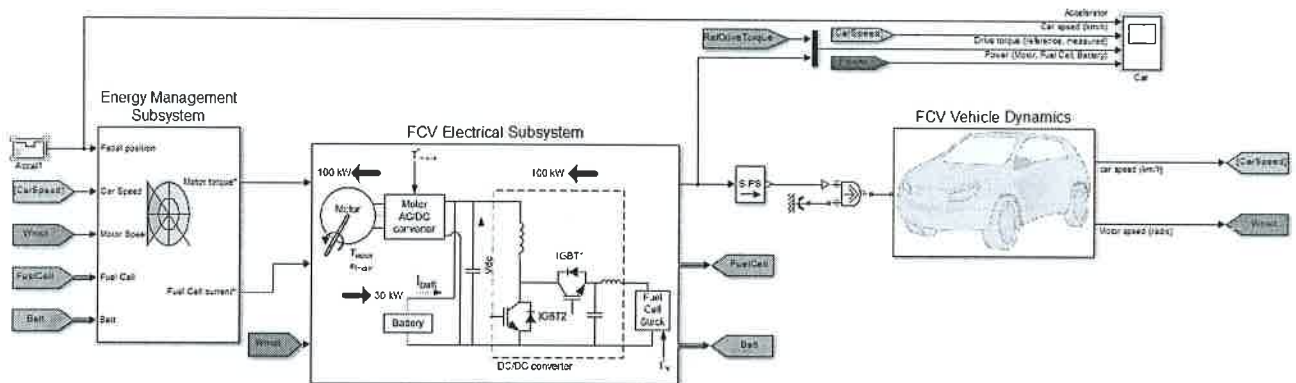
  
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Day 6 – Hands-on activities – 2.5 Hrs

Modeling and Simulation of electric powertrain system

- Modeling and Simulation of Electric & Hybrid Vehicle using MATLAB/SIMULINK Platform.
- Modelling of Vehicle dynamic systems of Electric Vehicle
- Modelling of Electric Powertrain system using Simscape



*[Signature]*  
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**Trainer Details:**


**Mr. Prasanthkumar Palani** - Automotive Homologation Consultant

**LinkedIn Profile:** <https://www.linkedin.com/in/prasanthkumarp/>

**Training Duration:** 2 Hours per Day -- Total 6 Days

**Take Away:**

- A free E-Kit filled with E-Books & research papers relevant to the field will be distributed to individual Participants worth 25K
- Lifetime Access to the Company's forum where students can reach for Technical and Career related enquiries.

  
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**Contact Details:**

Feel free to reach us for any queries

Mr. Aravind Muruganand

Head - Business Development

Haritha Techlogix

Tamilnadu

Phone: 90031 52737 / 83019 20578

Email: admin@harithatechlogix.com



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| me                  | email                                      | whatsapp_phone_number | qualification       | roll_or_id_number | Institution_or_organisation                             | if_other_institution_department | registration_charges_including_gst                           |
|---------------------|--|-----------------------|---------------------|-------------------|---|---------------------------------|--|
| da B                | lureddilee@gmail.com                       | 9490215517            | Assistant Professor | 2017              | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| AVAN KUMAR          | sravan_257@yahoo.co.in                     | 9989568252            | Research Scholar    | 14PH0205          | Other   | JNTUA                           | 799 INR - For Other Institutions                             |
| JANESH S            | Kiranganesh.S.2018.mech@rajalakshmi.edu.in | 9840732698            | Under Graduate      | 181101087         | Other   | RajalakshmiEngineer             | MECHANICAL<br>799 INR - For Other Institutions               |
| nar                 | tajay.eee@gmail.com                        | 8686128123            | Research Scholar    |                   | Other   |                                 | 799 INR - For Other Institutions                             |
| arya Beela          | sowndaryabeela.D0@gmail.com                | 7993645188            | Under Graduate      | 18251A02C0        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| anjankumar Kumar    | niranjan.merlis@gmail.com                  | 08074560979           | Assistant Professor |                   | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| imi                 | gouthami.erp@gmail.com                     | 9948883900            | Research Scholar    |                   | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| J RAJENDRA PRASAD   | prasad.mindmaster@vnce.ac                  | 9901791057            | Assistant Professor |                   | Other   |                                 | 799 INR - For Other Institutions                             |
| J RAJENDRA PRASAD   | prasad.mindmaster@vnce.ac                  | 9901791057            | Assistant Professor |                   | Other   |                                 | 799 INR - For Other Institutions                             |
| isantha Gowri       | vasanthagowri_eee@cbil.ac.in               | 9052221446            | Assistant Professor |                   | Other   | CBIT                            | 799 INR - For Other Institutions                             |
| ula layasri         | layasri.ram123@gmail.com                   | 6302831166            | Under Graduate      | 18251A0255        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| ula Layasri         | layasri.ram123@gmail.com                   | 6302831166            | Under Graduate      | 18251A0255        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| Thale               | sushil.thale@icrit.ac.in                   | 9869396998            | Professor           |                   | Other   |                                 | 799 INR - For Other Institutions                             |
| sha Pachipulusu     | pachipulusumounisha2001@gmail.com          | 7780104222            | Under Graduate      |                   | Other   |                                 | 799 INR - For Other Institutions                             |
| a vemulapalli       | rishihavemulapalli2020@gmail.com           | 6303602982            | Under Graduate      | 18251A0259        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| shini manajipeta    | msriharshinimanajipeta480@gmail.com        | 9381215274            | Under Graduate      | 18251A0218        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| Pravalka            | pravalkabattu1999@gmail.com                | 7095424097            | Under Graduate      | 17251A0294        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| i Unni              | unnikeerthy@gmail.com                      | 9769691045            | Research Scholar    |                   | Other   | FCRIT                           | ECE<br>799 INR - For Other Institutions                      |
| yaji                | anjalkk0876@gmail.com                      | 8008640150            | Post Graduate       | 20251D5404        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| JGARI PRATHYUSHA    | sweetyprathyusha2000@gmail.com             | 6261813134            | Under Graduate      | 18251A02A4        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| dhusri              | madhusri1125@gmail.com                     | 9705839475            | Under Graduate      | 18251A0281        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| dhusri              | madhusri1125@gmail.com                     | 9705839475            | Under Graduate      | 18251A0281        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| puraju Sai Madhusri | madhusri1125@gmail.com                     | 9705839475            | Under Graduate      | 18251A0281        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| puraju Sai Madhusri | madhusri1125@gmail.com                     | 9705839475            | Under Graduate      | 18251A0281        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| ra                  | madhusri1125@gmail.com                     | 9705839475            | Under Graduate      | 18251A0281        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| ra                  | Sowmyaseeth.nsp@gmail.com                  | 9000357359            | Under Graduate      |                   | Other   | AnnaUniversity                  | AUTOMOBILE<br>799 INR - For Other Institutions               |
| THAN B              | sirram_bvias@yahoo.co.in                   | +919894864529         | Assistant Professor |                   | Other   |                                 | 799 INR - For Other Institutions                             |
| ka sala             | reddymoulik241@gmail.com                   | 9505208890            | Post Graduate       | 20251D5408        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| i Shrayya           | shrayyakasark874@gmail.com                 | 9014917339            | Under Graduate      | 18251A02A5        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| i Ramanl            | nikitharamantsytele@gmail.com              | 08790145329           | Under Graduate      | 18251A0251        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| viha Kokkireni      | samanvithakokkireni2017@gmail.com          | 9346152216            | Under Graduate      | 18251A02A6        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| viha Kokkireni      | jangamavya05@gmail.com                     | 9398387917            | Under Graduate      | 18251A02A2        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| u Gurucharana       | gurucharana.vardaspu@gmail.com             | 07702314457           | Under Graduate      | 18251A0257        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| viha Kokkireni      | samanvithakokkireni2017@gmail.com          | 9346152216            | Under Graduate      | 18251A02A6        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| neeli               | mythineeli18@gmail.com                     | 9912620004            | Under Graduate      | 19251A0295        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| ra K V              | ksv.soumya@gmail.com                       | 9160482375            | Assistant Professor | 2080              | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| ti Ramya            | chaganii1998@gmail.com                     | 9550798075            | Post Graduate       | 20251D5401        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| ti Ramya            | chaganii1998@gmail.com                     | 9550798075            | Post Graduate       | 20251D5401        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |
| ti Ramya            | chaganii1998@gmail.com                     | 9550798075            | Post Graduate       | 20251D5401        | G.Naranamma Institute Technology and Science, Hyderabad | EEE                             | 590 INR - For GNITS Candidates (Roll or ID Number Mandatory) |

  
PRINCIPAL

**G. Narayanamma Institute of  
Technology & Science (for women)  
(AUTONOMOUS)  
Shaikpet, Hyderabad - 500 104.**

## Certificate of Appreciation

This is to certify that

**{{ FULL NAME }}**

has Successfully completed course requirements for the Six Days Competency Development Programme on “**Electric and Hybrid Vehicle Engineering**” held from 21<sup>st</sup> to 26<sup>th</sup> June 2021 organized by G. Narayanamma Institute of Technology and Science, Hyderabad & Haritha Techlogix, Tiruppur, Tamilnadu.

### Resource Person



**Mr. Prasanthkumar Palani**  
Chief Technical Consultant  
Haritha Techlogix, Tamilnadu.

**Dr.N.Malla Reddy**  
HOD EEE, GNITS & Program Co-ordinator

### Topics Covered

- Basic Components & architecture
- Selection of Electric Motors and Drives
- Motor control Technology for Traction Applications
- Power Electronics Technology for EV Applications
- Batteries & Battery Management Systems for Electric & Hybrid Vehicle Application
- Understanding EV Charging Technology
- Testing, Regulations, and standards for EV Applications
- Powertrain sizing Hands-on calculations
- Modelling and simulation of Electric and hybrid Vehicles in MATLAB/SIMULINK Environment

**Dr.K.Ramesh Reddy**  
Principal, GNITS, Hyderabad

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**G. Narayanamma Institute of Technology & Science (for women) (AUTONOMOUS)**  
**Shaikpet, Hyderabad - 500 104.**



# PRASANTHKUMAR P

## PROFESSIONAL EXPERIENCE

**Haritha Techlogix Pvt Ltd, Bangalore.**  
At Present

**Technical Consultant cum Trainer**

### Roles & Milestones:

- Support the clients on the Certification of Components and Vehicle from Government **Regulatory Authorities** by coordinating the testing activity at ARAI, ICAT, GARC and other nodal agencies and ensure proper testing and Homologation of the Vehicles being performed.

**DC Energy Pvt Ltd, Trichy**

**Head - Operations & Design**

### Roles & Milestones:

- Lead a Team of 20 Members for the full vehicle level development project.

**Mercedes Benz Research and Development India Pvt Ltd**

**Product Design Engineer**

### Roles & Milestones:

- Concept Design, Failure analysis, DFMEA on the Electric Drive Automatic Transmission systems.

**Mercedes Benz Research and Development India Pvt Ltd**

**Student Trainee**

### Roles & Milestones:

- Feasibility study / Weight Reduction / Performance Analysis / Differential system of Electric Drives

## EDUCATION

- **Master of Technology in “Vehicle Engineering and Transport Management”**  
“Central Institute of Road Transport, Pune”
- **Bachelor of Engineering in “Automobile Engineering”**  
Tamilnadu College of Engineering, Anna University, Tamilnadu

## CERTIFICATIONS & INTERNSHIPS

- Certified for Proficiency in “**Automotive Testing and Certification**” from ARAI, Pune
- Certified for Proficiency in “**Automotive Electronics and Management System**” from ARAI, Pune
- Certified for Proficiency in “**Engine Testing and Certification**” from ARAI, Pune
- Certified Master Trainer for “**Electric Vehicle Technology and Business Opportunity**” from “The Ministry of Micro, Small and Medium Enterprises”, Delhi.
- Till date Trained More than **4500+ Students , 1000+ Faculty and 500+ Professionals in various Automotive domains.**

## PROFESSIONAL MEMBERSHIP

- Professional Member of Society of Automotive Engineers, India
- Professional Member of society for smart e-mobility, Coimbatore.
- Professional Member of Automotive Skill Development Council, Delhi.



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DEPARTMENT OF INFORMATION TECHNOLOGY

2020-2021

# REPORT

## Competency Development Program on Electric and Hybrid Vehicle Engineering

Date of Program: 21<sup>st</sup> June 2021 to 26<sup>th</sup> June 2021

Collaborating Agency: Haritha Technlogix Pvt. Ltd.

Number of Participants: 35

**About Resource Person:** Mr. Prasanthkumar Palani is a certified trainer in Electric vehicle Technologies and a Tehnical consultant and trainer of Haritha Techlogix pvt. Ltd. Banglore who Support the clients on the Certification of Components and Vehicle from Government Regulatory Authorities by coordinating the testing activity at ARAI, ICAT, GARC and other nodal agencies and ensure proper testing and Homologation of the Vehicles.

**About the Program:**

Competency Development Program on Electric and Hybrid Vehicle Engineering is a 6 day online program through Microsoft teams, started on 21<sup>st</sup> June 2021 and ended on 26 th June 2021 with timings 3:00 PM to 5:00 PM. The program is well designed by the Harith Techlogix team and course training is given by Mr.Prasanth kumar Palani and Mr.Aravind Muruganand. Excelent program with 10 modules along with hands on training sessions to the participants as present emerging area of research is on Electric and Hybrid vehicles.

**Meeting Link:**

[https://teams.microsoft.com/j/19%3ameeting\\_YWQwMzI3ZjQlNmViZS00OWY5LWJkZWlnNzhjODUxY2Q2NTA5%40thread\\_v2/0?context=%7b%22Tid%22%3a%22404909d1-cac9-43b9-855e-126d50daf5cf%22%2c%22Oid%22%3a%22fc860ef9-7b56-4197-900c-ccc40eccfab7%22%7d](https://teams.microsoft.com/j/19%3ameeting_YWQwMzI3ZjQlNmViZS00OWY5LWJkZWlnNzhjODUxY2Q2NTA5%40thread_v2/0?context=%7b%22Tid%22%3a%22404909d1-cac9-43b9-855e-126d50daf5cf%22%2c%22Oid%22%3a%22fc860ef9-7b56-4197-900c-ccc40eccfab7%22%7d)


**Outcomes:** Knowledge related to emerging area Electric vehicles is a take away from the program to all the participants. E-Kit to all the participants with good number of research papers.

**Overall Feedback:**

The program is well received by the faculty and students across India, and requested for similar set of programs in coming years too. All participants felt good about the hands-on practical session, and suggested for increased duration of workshop.

Number of participants benefited: 35 participants

  
Workshop Coordinator

  
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Technology & Science (for women)  
(AUTONOMOUS)  
Shaikpet, Hyderabad - 500 104.

  
HOD-EEE