(151-SCI-07-01) DIPLOMA - SERVICING AND MAINTENANCE OF ELECTRIC VEHICLES

Significance of the Program

The paradigm shift from Internal Combustion Engines (ICE) to Electric Vehicles (EV) globally is an approach towards net zero and clean environment. The EV technology has ample opportunities for skilled personnel. As modern electric vehicles combine diverse fields, it is vital for the inquisitive learner to receive well-planned training that shall enable them to acquire skills across electrical, mechanical, electronics and computer science fields needed for servicing and maintenance of EV. As part of the program the students shall be professionally trained in technology tools, EV related curriculum and continuous assessments methods that shall empower them with necessary skills and knowledge required to implement the program through a learner-centred pedagogy that is in-line with the NEP 2020. This two-year Diploma Program turns the students as professionals for a modern electrical vehicle transportation industry.

Career Options

With the great demand for transitioning from ICE to EV, there is an exponential growth in the global e-mobility industry, offering numerous EV design engineer jobs for both existing talents and new hires.

- Product Development & Product Validation Engineers
- Design Engineers
- Vehicle performance Engineers
- Program Manager- Technical lead

OUTPUTS	OUTCOMES
• Understand the technology of EV and gain a deep understanding of powertrain electrification. • Develop systems engineering approach to EV design. • Learn how to disassemble and reassemble an electric vehicle. • Develop the skills to design EV controllers.	• Become an advanced energy storage systems (ESS) expert. • Enables the student to implement design, Verification, Validation Planning (DVVP) skills in real time. • Enables the student as a master in EV maintenance, safety, salvage and recycling best practices.

• Master EV maintenance, safety, salvage and recycling best practices.	

Major Course Outline

- EV Design, Verification & Validation Planning
- EV Thermal Management, Advanced Energy Storage & Battery Systems
- Motors, Generators & Power Converters
- Energy Sources and Powertrain Electrification
- Control Systems as applied to Electric Powertrains
- EV Systems Engineering
- EV Modelling and Simulation