<u>Course Title:</u> Smart Mobility with Electric Vehicles (EV), Charging Systems, and Reliability Assessment

Course Overview: This course aims to provide students with a deep understanding of electric vehicles (EVs), their charging infrastructure (including wireless charging), and methods for assessing the reliability of EV components. Through a combination of theoretical knowledge and hands-on experience, students will gain expertise in the rapidly evolving field of electric mobility.

This 15-week course covers most of the aspects of EV and mobility infrastructure. Provides hands on experience in different laboratories as well on 02 EVs on campus. Industry experienced professors along with EV researchers would be providing lectures and end-end experience for potential students.

Course Duration: 15 weeks (one semester)

<u>Course Instructors</u>: Arif Sarwat, Eminent Scholar Chaired Professor and Dr. Mohd Tariq (Visiting Scholar and Assistant Professor, India)

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Course Objectives: By the end of the course, students should be able to:

- *i.* Understand the fundamentals of electric vehicle technology.
- *ii.* Describe various EV charging technologies, including wireless charging.
- *iii.* Assess the reliability of EV components using appropriate methods and tools.
- iv. Apply theoretical knowledge through practical experiments and projects.
- *v.* Analyze the environmental and economic impacts of EV adoption.



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