IIT Mandi
Proposal for a New Course

Course number	: ET504 P
Course Name	: Systems Design for Electric Vehicles
Credit	: 0-0-3-2 (L-T-P-C)
Prerequisite	: None

Intended for   : M.Tech in Electric Transportation

Distribution   : Core for M.Tech in Electric Transportation students,

Semester: Winter Session of Year I

Mutual Exclusion   : NA

Preamble: The objective of this course is to provide hands-on experience in system design to the M.Tech. (ET) students after completion of their first-semester course work. This course will not only help them in understanding the practical application of various core and elective courses, but also will prepare them for specializations they may plan to pursue.

The students are expected to work on modeling, design, and implementation of various subcomponents of EVs with the following key deliverables--Analysis of validated ideas with different case studies and demonstration of key results through software/hardware platforms at the end of the course.

To ensure the engagement of each and every student, the projects are supposed to be done individually. Students are encouraged to pursue the same or similar projects as their dissertations.

Course modules: It is advisable that the projects should be related to the courses M.Tech.(ET) students may credit or the specializations that this program offers. Therefore, students can opt for any project in various subcomponents of EVs. Additionally, they are allowed to select a project from other areas, as long as the project has **30% or more overlap** with any of the three specialization of M.Tech. (ET) curriculum.

Deliverables: A student must declare the deliverables of her/his project in the initial project proposal after consulting with the respective mentor(s). While the initial project proposal and the final report carry some marks, a significant portion of the marks, **70% or more**, is allotted to the deliverables to emphasize their importance.

Contact hours: On average, a student should work 40 hours per week on her/his project. The students are supposed to meet their respective mentors at least once in a week to report their progress.

Evaluation: There will be two evaluations—one in the beginning of the winter vacation and the otherone in the beginning of the forthcoming even semester. In the first evaluation, the students will be graded based on the initial project proposals they have submitted. During the second evaluation, they will be evaluated based on their progress with respect to the promised deliverables, their project reports and the understanding they have gained from their respective projects.

Textbooks: Related literature.

Similarity Content Declaration with Existing Courses: NA