



## **Static and dynamic exhibitions of the first-generation electric vehicle developed by the Department of Mechanical and Engineering of National Chiayi University – from components to System**

The captioned exhibitions were held on November 27<sup>th</sup>, 2024 at the Department. It demonstrated the outcome of the Intelligent Electric Vehicles System Platform Project which was sponsored by the University Higher Education Sprout Project. The outcome was a successful integration of theory and practice that students learned in the Department. The audience could be initiated from the versatile, informative contents on electric vehicle technology.

In the static exhibition, the audience could learn the technological details of an electric vehicle and of the development of the vehicle built in house through well designed, lively posts. In the dynamic exhibition, the audience experienced how the electric vehicle functions and have direct interactions with the development team. The audience could have a systematic understanding about the structure, the components, the system, and furthermore the operation of an electric vehicle.

This is a first generation vehicle developed by the Department, based on which, conduction of further research and development is allowed. It covers several kernel techniques including design, welding and fabrication of the structure, design of the suspension system, actuating mechanisms and the power transmission system, the integration of battery and motor driving, and the control system and performance tuning.

The audience included the President of the University, the Dean of the Faculty, and the faculty and students of the Department. The participants witnessed the performance accomplished by and the perspiration devoted by the team members. The team devoted their efforts to realizing their draft idea for the exhibited vehicle through numerous modification and tuning. It demonstrated the technological background, the creativity, the ability of problem solving, and the integrity of the Department.

The platform allows students to realise and commercialise the knowledge learned in lectures. The sequel will focus on the link between theory and fabrication on the subjects of optimization of electric vehicle performance, application of new energy, and autonomous driving. The aimed subjects are well discussed in the global green energy sector and through which, students can exploit numerous practice and academic research topics. Based on the platform, the Department will seek for future participation in the University Higher Education Sprout Project with the aim of being a pivot linking the University and the industries. Future projects will allow students to participate in the research and development of intelligent electric vehicles and equip themselves with the ability of innovation and fabrication.







## The faculty and students of the Department



十大大十大大十







Dynamic demonstration



十六十六十六十六十六